REWIRING WALES

Building A Stronger Economy

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Introduction

This report sets out to examine why Wales has lagged other parts of the UK and Europe economically and what can be done to rectify this. It is a task that is likely to be more pressing following the damage being inflicted on business and society by the Covid-19 pandemic. Study after study has highlighted Welsh weaknesses – poor productivity, leading to lower levels of output and depressed wage levels, high levels of poverty, disappointing educational performance, and unsatisfactory health outcomes.

The British Government has declared a new willingness to address regional imbalances across the UK and a programme of levelling up measures, including investment in new infrastructure, is promised. This report argues that while this is to the good, a more transforming vision for Wales should be articulated. Wales should not be seen as a perpetually poor relation within an economy dominated by London and the South East and the needs of its financial services industry, but more closely resembling the better-balanced economies of other small nations.

Yet, to make moves in this direction it is necessary to understand how far Wales needs to travel. Despite the encouraging growth of new Welsh-owned businesses over recent years, Wales is still a branch plant economy with too few companies owned and controlled from Wales or fully integrated as equal partners in global supply chains. This is in sharp contrast with the Republic of Ireland which in just a few decades has transformed itself into a rich country, home to a host of overseas and especially US companies operating in advanced sectors, and to an impressive cohort of Irish-owned multinationals.

In the final section of the report it is argued that a more business-minded approach is needed throughout Welsh society, not unlike that in Ireland, and that new institutions and a new role for Government is needed. Better business intelligence must be at the heart of this and the long-standing debate over the absence of a dedicated agency to deliver these changes

needs to be resolved. An economic development body for Wales, like those in existence in Scotland, Ireland and most European countries, should be created. This new implementation strategy, taking execution out of the hands of the civil service, should be backed by a greater willingness to use public funds to help shape the Welsh economy so that it best meets Welsh needs and to ensure key sectors grow and thrive.

The principal recommendations made at the end of this report are that

- The role of the civil service should be re-examined to separate economic policymaking and implementation.
- A new agency or agencies should be established to promote small business growth, medium size business development, inward investment, productivity, and export activity.
- The extension of state support for key sectors in the form of direct Government stakes should be considered
- Greater involvement with the venture capital industry should be sought and a Welsh venture capital trust investing in Welsh start-ups established.
- The foundation sector should be put at the centre of policymaking and incentives and penalties to secure greater public sector purchasing put in place.
- Support should be given to businesses seeking to re-shore products currently made elsewhere, and further efforts made to ensure Welsh food producers contribute a bigger share of the nation’s food purchases.
- The Welsh education system should be refocussed on meeting the needs of Wales, and financial and other measures implemented to persuade more students to study in Wales or return to Wales on completing their studies.

Faulty Circuits

Wales, for as long as any one of us can remember, has had a weak economy, and to put it bluntly, does not pay its way, raising far less in tax revenue than it consumes – the fiscal gap. Individual studies over time have identified the reasons for the economy's chronic weaknesses as they are seen at the time and have concluded that one or other new technology or strategy will provide an answer.

Foreign direct investment, oil from the Celtic Sea, microtechnology, Japanese just-in-time work practices, technology centres, key sectors, and most recently the wider use of public procurement and the foundational economy have all been called to aid but lasting change capable of elevating Wales from near the bottom of most UK economic league tables – so as to balance its books - has remained a chimaera.

There are indeed successes in growing fields compensating to some extent for weaknesses in other areas. The Welsh Government's 2017 Economic Action Plan (EAP) states grandly that Wales is home to some of the most innovative, dynamic and exciting economic activity anywhere in the world: world-class centres of aerospace engineering and nuclear energy in the north; cutting-edge metallics innovation, marine technology and automotive production in the south; award- winning food producers in rural Wales.

Cardiff University has carved out a strong position in medical research and the city is home to a growing fintech sector. An encouraging number of health-related companies have set up shop in Wales, too, including several that are playing a prominent part in the fight against Coronavirus. Swansea University has developed a range of partnerships with international businesses. Newport has an important semi-conductor industry.

Our two most westerly ports, Milford Haven and Holyhead have established themselves modestly in the cruise ship sector, bringing tourists to enjoy the benefits of improved visitor

facilities. Wrexham and Deeside have become modern manufacturing centres well integrated into the UK and international economy.

Welsh Government admits, however, to the extent of the problems: Wales must face the challenges of deindustrialisation; economic inactivity; unstable and insecure employment; productivity that lags the rest of the UK; accelerating technological change; slow diffusion of innovation; costly sickness and in-work illness rates and the challenge of an ageing population. To these can now be added recovery from the Covid-19 pandemic.

The underlying causes have been regularly identified: the loss of many of its brightest individuals, who choose to study in England and never return, part of a broader brain drain affecting England's regions, too, into London and the south east; the regular absorption into larger businesses elsewhere of successful Welsh start-ups and medium size companies, hindering the development of a balanced, and locally owned and managed business economy; the continued underfunding of Welsh infrastructure and other projects because of a Treasury bias towards more heavily populated regions.

Globalisation has had a damaging effect on the least skilled everywhere, enabling their jobs to be exported, or cheaper labour to be imported. It has brought benefits, but these have gone disproportionately to the better-off, perhaps the most important reason for the election of populist leaders in the US and elsewhere and the Brexit vote in the UK.

In Wales it is necessary to look no further than Swansea to see its impact. The entrance into the city from the east used to pass motor industry, engineering and aluminium plants offering skilled and well-paid engineering jobs. Now it is lower-skilled shelf-picking for Amazon, (admittedly adjoining large scale new university facilities). Call centres, valuable as they are as sources of employment, have replaced - with lower wage levels - more satisfying and fulfilling jobs in manufacturing.

Lagging Behind

Against this background output per person in Wales has continued to lag the rest of the UK, which itself has a poor record in comparison with competitor nations, as a recent report from Cardiff Metropolitan University, pointed out.[1] This painted a worrying picture of Gross Value Added per unit of labour, making Wales the weakest of all UK regions and 18 points behind the average for the UK. (The strongest region, London was 40 points *above* the UK figure.)

The explanation lies in part in the 21st century structure of the Welsh Economy. Much of Welsh business is not just micro, but positively nano in size, where gains in productivity are particularly hard to find.[2] There are too few medium size firms and a decreasing number of large companies as foreign firms have left for lower cost locations. Much Foreign Direct Investment (FDI) has also been branch manufacturing with limited local senior management roles, and answerable to decision-making regional headquarters elsewhere in the UK (or the rest of Europe). Such was the case in the coal and steel era, too.

Table 1. Gross domestic product by UK constituent country and region 2018.

Regions	Population	Total GDP (£bn.)	GDP per head (£)
UK	66.4	2,140.3	31,976
England	55.9	1.84	32,857
North East	2.66	62.6	23,569
North West	7.29	207.4	28,449
Yorks. & Humberside	5.47	141.7	25,859
East Midlands	4.8	124.6	25,946
West Midlands	5.9	159.8	27,087
East of England	6.2	186.4	30,069
London	8.9	487.1	54,686
South East	9.13	311.3	34,083
South West	5.59	158.1	28,232
Wales	3.13	74.9	23,866
Scotland	5.44	161.3	29,660
Northern Ireland	1.88	48.9	25,981

Source: ONS

[1] *Managing Productivity in Welsh Firms: Final Report 2020.* Hodge Research Project, Cardiff Metropolitan University.
[2] *A Strategy for the Welsh Economy*. Williams K. et. al. IWA 2015

FDI brings the biggest benefits when accompanied by management and other higher-level functions such as research and development activities and this has generally not happened in Wales. Even if firms with these characteristics move on, there is a much better chance they will leave behind individuals with the knowledge and expertise to start companies in similar or different fields than if the plant has simply been a branch factory.

Percolation through to Welsh businesses of productivity lessons - one of the original hopes pinned on the capture of such firms for the Welsh economy – has therefore, perhaps understandably, rarely happened. Improvements created elsewhere are unlikely to create or drive an innovative culture that will then spread beyond the recipient organisation.

Poorer regions, such as Wales, have a bias anyway towards lower productivity, creating a vicious circle that is hard to break. Individuals will understandably protect themselves in areas where jobs are most scarce, clinging on often for little reward in unviable retail or other businesses, taking market share and profitability from competitors.

Geography, too, is partly responsible for the gap with comparable public services in richer parts of Britain. Transport for Wales can never hope to match the productivity of the commuter train services to London with their much higher passenger numbers. There are other factors which add to the complexity of the problem, for example the balance of sectors within an economy and the shares respectively of the public and private sectors.[3]

Yet, the importance of securing increases in Welsh productivity cannot be under-estimated. Projections show a decline in the numbers of young people entering the working population over the next few decades, so productivity will have to increase merely to maintain current levels of output.[4]

[3] For a discussion of productivity issues generally see https://www.iwa.wales/agenda/2017/01/chronic-yes-hopefully-not-incurable/

[4] The Cardiff Met report highlights issues Welsh firms should be addressing if the whole gamut of problems surrounding productivity are to be addressed. These include better measuring, strategic planning, and incentivisation to promote innovation. Management capacity and skills, however, are key barriers that will need to be overcome.

As if these structural weaknesses were not enough a deep recession seems likely after the Covid 19-induced partial cessation of production and consumption across the world in the first few months of 2020. Scary levels of employment loss have been suggested if companies find it impossible to resume operations after months with little revenue. The hit to incomes will impact consumer spending, adding to the problems facing business.

This is even before the challenges of reacting to global warming and moving to a low-carbon economy are considered. The world economy and that of virtually every country within it, including Wales, will be fundamentally changed. Government debt levels have rocketed increasing the burden of debt servicing if, and when, interest rates rise from current historically low levels. A share of this burden will be attributed to Wales, pushing yet further the gap between tax raised in Wales and spending.

It is tempting to say that these problems are inexorable. Welsh people (like their counterparts in most of the English regions), the argument runs, are fortunate to enjoy the benefits of funding from the taxation surplus generated in the south east (and until Brexit from EU finding). Higher tax receipts garnered in London and the South East of England. provide the money for public services, such as health and welfare benefits. These ensure that, despite lower income levels resulting in lower tax revenues, Welsh people enjoy the same level of public services as the rest of Britain.

The fiscal gap

Yet, the size of Wales's deficit is not pre-ordained and is larger than a self-respecting nation should accept as inevitable.[5] In 2018-19, according to the Cardiff University fiscal analysis report, the gap between public spending revenues *from* Wales and public spending *for* Wales stood at £13.5bn, equal to 18 per cent of total Welsh gross domestic product or £4,300 per head.[6] Even before Covid-19 and its attendant costs, the

[5] *Wales' Fiscal Future: A Path to Sustainability?* Wales Fiscal Analysis, Cardiff University, 2020

[6] The Welsh dependence on transfers has been analysed before, notably in a 2001 report for the Institute of Welsh Affairs by Professor Ross Mackay of Bangor University. At that

resources likely to be made available in the future were not likely to be on the scale needed to transform the Welsh economy, the academics point out, leading possibly to a widening of the gap.[7]

An incipient understanding of this hard reality has resulted in the previously unthinkable beginning to be thought. If Wales is trapped in dependence as part of the union, then why not a complete break? If Scotland can consider such a move, then why not Wales? A sharp shock, the marchers on Wales's 2019 independence rallies were perhaps thinking, might hurt but also might lead over the longer term to a healthier independent nation. The question why not has also begun to be asked more widely, including in a recent article in ClickonWales by the main thinker behind plans for the South Wales Metro.[8] Others have seen in the differing responses from Cardiff and Westminster to the Covid-19 crisis evidence that Wales and England are moving apart anyway.

Constitutional debate is taking place in some quarters in Wales even if this has not been noticed yet across the border. Whatever choices are made, however, there is a mountain to climb if Wales is to reduce its current financial dependence. Taxation changes are perilous with unforeseeable consequences whether a choice is made to reduce or increase the burden on individuals and corporations.

The burden of tax in Britain already falls principally on the wealthy, the income tax threshold at which tax starts now standing at £12,500, hence excluding in poorer regions a greater proportion of the population, who will also find themselves less likely to be drawn into the National Insurance net. Though there can be arguments about whether the rich should be taxed more, the system is already progressive, the share increasing as incomes rise. Exacting higher taxes from

time, however, the emphasis was on securing a more just distribution of funds to Wales (compared with Scotland), amid hopes stronger powers in Cardiff with the arrival of the National Assembly would strengthen the Welsh economy and raise income levels. *The Search for Balance: Taxing and Spending across the United Kingdom.* IWA 2001.

[7] There are gaps between regions and centre in other countries - Co. Donegal in Ireland is much poorer than Greater Dublin - but the UK has some of the widest disparities. Wales has, however, slipped from being ahead of Northern Ireland in GDP until comparatively recently to being stubbornly behind.

[8] *What sort of Wales do we want?* Mark Barry, IWA March 2020

the wealthy few in Wales would not raise large sums and could act as a disincentive.

Changes to corporation taxes to try to raise more funds are also problematic. The argument for a lower rate in Wales in a bid to drive up corporate activity and profitability has been advanced but the risk that businesses would relocate for this purpose alone, depressing overall revenues, suggests UK Governments would not sanction it. Increases would be counterproductive.

The reality is that unless more people in Wales are drawn into higher income bands, income tax cannot raise substantial extra funds in Wales and help to narrow the country’s dependence on resources from outside or make independence a comfortable prospect. Nor will the corporate sector generate significant extra funding unless it increases in size and profitability.

To close the gap between the revenues raised in Wales and the amount spent, the Welsh economy has to grow faster than that of the rest of the UK for a sustained period – generating higher wages and profits - something it has not achieved except for a brief period in the 1950s when male (though not female) full-time employment was high, and demand from the post-war rebuilding of the UK economy and the growth in vehicle ownership and white goods resulted in high levels of demand for coal, steel, and other products.

Levelling up

The commitment the recently-elected Westminster Government has made to levelling up the UK offers some hope that the structural needs of the regional and national economies outside London are going to be addressed with appropriate levels of funding through the new Shared Prosperity Fund – the replacement for EU regional programmes, including Objective One.

The current British model dates to the 1980s when Prime Minister Margaret Thatcher, admittedly in response to severe labour market inflexibilities of the time, and strongly influenced by her Trade Secretary and economic guru, Sir Keith Joseph, chose the free market ideas of the Chicago School monetarists as their principal guiding light. The succeeding decades saw

Government gamble on the benefits of growth in the richer financial sector orientated parts of the UK trickling out to the regions.

The policy of the previous four decades, which had seen the use of a variety of sticks and carrots to encourage industry and services to locate in the regions outside London, was dropped. EU funding, much of it directed towards infrastructure improvement, was to undertake the heavy lifting required to raise prosperity levels in the poorer parts of the UK.

The assumption was that rising prices for land, housing, transport, and other services would lead to overspill elsewhere, as companies and individuals moved away in search of lower costs. Instead, the overheating effects on London costs have been offset by increased spending on transport provision, greatly extending London’s labour market reach into neighbouring regions, and by large increases in compensatory rewards to professionals in financial and other higher value services.

The phasing out of a previously more active regional policy, a laissez-fair attitude towards the shift of manufacturing to low-cost countries and a willingness to allow ownership of UK companies to be transferred to consolidating overseas multinationals has consequently widened the gap between regions.

The results for Wales have been another loss of jobs as serious in some ways as the fall in mining employment in previous decades. The departure from Wales of large scale, multinational companies, such as Alcan, Alcoa, BP, ICI, DuPont, Bosch, Exxon, Amoco, Ford, and RTZ by late 2019 and down-sizing by others such as Sony and Panasonic, have changed the composition of the Welsh industrial base.

Unlike in other countries that have sought to retain domestic ownership, Wales and other regions has had no protection when multi-nationals have moved, in pursuit of lower costs or greater incentives. As a result, fewer people are now employed in companies with more than 1,000 staff and many more in

smaller companies and micro companies employing just 1-5 people.

This has had a knock-on effect on the quality of jobs, the availability of training, the introduction of new ideas and technologies, the development of a supporting supplier base, career progression, and the availability of full-time and permanent employment, all of which can be offered more efficiently by larger companies even though numbers in work in Wales and in female employment - much of it in part-time and/or precarious self-employment -have shown increases in recent years.

It also diminishes the revenue capable of being raised in Wales as smaller companies, because of lack of scale, will generally be less profitable than their counterparts. A separate side-effect is that in the absence of any defences and the inadequate provision of safeguards Welsh businesses are more liable to capture by bigger competitors and less able to engage in take-over activity themselves or mount export campaigns.

The UK Government's apparent tilt back towards the policies long championed by Conservative grandee and former Cabinet minister Michael Heseltine, and by One Nation Conservatives in the post-war era, is all to the good, yet a danger also lies herein. The process promised is being seen mainly as a way of revitalising the north of England. Wales, the South West, the East are rarely part of this new conversation, despite in some cases having equal or even greater needs. HS2 is intended to transform the Midlands and the north. it will be accompanied by other infrastructure spending on an upgraded east west rail link, one of the demands being made with increasing insistence and effectiveness by the region's mayors.

A report last year, chaired by the former head of the civil service, Lord Kerslake, outlined a series of measures to deal with what it described as a problem that had persisted for the past 50 years. Suggestions included a new spatial plan for England, and Parliamentary committees and Cabinet positions which recognise and respond to the Powerhouse projects in the

North, the Midlands, the South West and South East.[9] Twenty years after devolution new powerfully endowed regional institutions and voices are therefore emerging in England which could be allies but also rivals to Wales for levelling investment.

HS2, with its £100bn and rising price tag may come back under consideration, given the other priorities the Government will have and the vast sums that are having to be deployed in the fight against Coronavirus and in recovery. If it does proceed, however – and the Government confirmed in April 2020 that the first phase to Birmingham would – the boost it will provide across central England could be a negative for Wales, which could become less competitive as a location for investment as a result. The UK Government must be pressed hard to ensure the full consequential of such expenditure is made available in additional regional support finance to enable Wales to continue to invest in its own infrastructure networks, whether road rail or telecommunications.

It will be some months before the shape of the post Covid-19 recovery – a V-shape, straight down and back up again, or a U-shape - possibly a bath shaped U with a prolonged bumping along the bottom as others fear - becomes clear. This will determine how much will be spent on the levelling up programme and over what length of time. Covid-19 recovery Budgets will be forthcoming from the Treasury this year. These will also determine how much will be made available in general funding to Wales.

Whatever shape the recovery takes, the stock of companies in Wales is likely to be affected adversely, with many weaker businesses not surviving. The encouraging growth in activity levels – the proportion of individuals drawn into the labour force – seems likely to be reversed, leading to a return to high levels of unemployment.

How well is Wales prepared to meet the challenge within the scope of the powers available to Welsh Government? In the twenty years since devolution, strategies have come and gone. Policymaking has often been piecemeal, inconsistent, and

[9] *Fairer and Stronger.* The Second Report of the UK2070 Commission.

subject to change, the opposite of the stability which businesses require.

Execution, previously the responsibility of agencies – the Welsh Development Agency (WDA) for industrial development, and the Wales Tourist Board for tourism - has been brought in-house into the civil service, the tasks of promoting Wales abroad being passed to Wales Trade and Industry and of supporting economic development domestically to Business Wales.

This break with the previous system – counter to the arrangements prevailing in many competitor territories, including Ireland and Scotland, where an agency approach has been retained – has been much criticised and the demise of the WDA much lamented by some critics.

Even more importantly, however, policy has continued to address symptoms rather than causes. A break with the past is clearly needed and an effort made to go further back to the root causes of economic weakness, and hence Wales's seemingly unbridgeable fiscal gap.

The emphasis of the past decade has been on supporting sectors: life sciences; financial services; creative industries; energy and environment; advanced materials and manufacturing; and information technology, overseen by sector panels consisting of representatives of the sectors chosen. The industries concerned – because they were in the sectors with the best prospects anyway - have generally prospered but were likely to have done so regardless

The Welsh Government recast its approach to economic policy three years ago. Sectors have not been ditched but its new 2017 Economic Action Plan envisaged a return to a more spatially-based policy - the main thrust of UK regional development efforts for several decades after World War Two until the introduction of more free market policies in the 1980s.

Support is based around three national thematic sectors, plus foundation sectors, to be delivered in conjunction with a new economic contract to be negotiated with business. This is

topped by a new division of Wales into three regions, led by chief regional officers.[10]

Key strategic areas of the economy, broadly defined as tradeable services (such as fintech and online insurance), high value manufacturing (examples being compound semi-conductor manufacturing and composites), and enablers (digital, energy efficiency and renewables) will qualify for support within the new regional framework

Decarbonisation, automation, artificial intelligence, and other forms of digitalisation are transforming industries and individual firms, Welsh Government argues, and breaking down the traditional boundaries between different sectors of the economy. At the same time, the opportunities of the data revolution are increasingly driving new collaborations across sectors. The aim will therefore be to re-base support in a way that can help build the industries of the future.

To answer criticisms of the narrowness of the previous canvas “foundation sectors” - care, tourism, food, and retail – have been added into the “strategic areas” listed above. The laudable intention is to embrace parts of the economy where large numbers are employed and which are spread across Wales, including in some of the poorest rural areas.

Through support and partnerships in these areas, Welsh Government hopes the new structure will help small and often fragile enterprises embedded in local communities to increase their productivity, encourage skills progression, and develop more sustainable business models.

There is much to support in this new approach, but the complexity of the delivery arrangements seems to shout red tape. In return for investment and other services provided, businesses will be expected to commit to an economic contract stipulating that they will contribute to Welsh Government objectives. In return for funding, they will be obliged to sign up to at least one of five calls to action – decarbonisation; innovation, entrepreneurship and headquarters; export and

[10] *Prosperity for All: Economic Action Plan.* Welsh Government 2017.

trade; high quality employment, skills development and fair work; R&D, and automation and digitisation.

The new structure is intermediated through three new regions – North Wales, Mid and South West Wales and South East Wales - headed by three chief regional officers. These regions bear no relation to any existing regional, or local government boundaries or to the new city regions. It is hard to see what holds together a region such as Mid and South West Wales which extends from Fishguard across to Swansea, up to Aberystwyth and on north through the Cambrian Mountains and the Severn Valley to the borders of Wrexham county borough.[11]

Faced with the complexities of this sort it is a fair bet that many businesses, including those with the best growth prospects, will give the initiatives a wide berth and continue to plough a separate furrow. It also fails to offer goals or indicate how the plan will be delivered. In a section entitled *How will this work?* new ideas are nearly all introduced with the words *"We will..."* but in only one such sentence is followed by the key word *"deliver",* and it remains unclear exactly how execution and implementation will be achieved.

A new model

Yet, even if these bureaucratic issues can be overcome, only an optimist would now confidently predict Wales is on the path towards closing the gap with the more prosperous regions of the United Kingdom. So, is now the time to go further and suggest that Wales wants to be a different kind of nation from the prevailing British state, overwhelmingly dominated by London-based services (and especially financial services)? This is a specialisation that works well for London and the south east but clearly not for most of the rest of the country.

A different and broader perspective on Wales's economy that illuminates the chronic problems - leading not just to a large but possibly growing Covid-19 induced fiscal deficit - needs to be articulated. A fuller debate on independence, or other new federal or con-federal arrangements has begun, especially after

[11] A fourth region covering Mid Wales may be added.

the immense shock – equivalent to war in many respects - that Covid-19 is delivering to society.

The fate of the idea in the current climate is hard to determine. The public across Britain may see safety in being part of the wider British state because it has the resources to weather such a storm as well as the research needed to provide vaccines or a cure. Equally, many in Wales might conclude that if one of the poorest countries in the EU, Greece, can emerge with one of the lowest death rates, big is not necessarily beautiful.

Whichever is the case a commitment to creating a different Wales, even within the United Kingdom, should be one that will have resonance with large sections of the population. A report for the Scottish Government published in 2018 called for just such an approach, though outside the UK. [12] It pronounced the UK economic model to be wrong for Scotland, claiming policies that led to a concentration of economic activity in London and the South East, low wages, and a large gap between rich and poor could only depress growth and opportunity elsewhere.

It argued instead for a new direction built around good governance, long term cross-partisan strategy, innovation, international investment, exploitation of resources and export-orientation. The arguments are the same for Wales but the mechanisms for achieving them need overhaul or replacement.

As developed since the “Big Bang” opening of the City of London to international ownership in 1987 Britain’s largely foreign-owned financial sector has exhibited a much greater interest in raising funds for global companies and governments, and in acting as the world’s principal foreign exchange clearing house than in supporting the domestic economy.[13]

The needs of Wales or any other British region have not figured prominently on the agenda at City meetings, and incentives to make this happen do not exist. By contrast, the smaller nations

[12] *Scotland - the new case for optimism. A strategy fort inter-generational economic renaissance.* The report of the Sustainable Growth Commission. May 2018.
[13] To this list of externally orientated specialities could be added London’s pre-eminence as a legal centre, offering advice on activities as diverse as international mergers and acquisitions and the tax affairs and divorces of global multi-millionaires.

which Wales might aspire to have as its model have not only grown to overtake Wales in wealth since World War Two but are happier as well.

Wales should make clear it is not prospering as it would wish in a UK service-dominated economy in which a disproportionate share of national wealth is generated by an internationally orientated financial services sector, substantially based in one region, and dependent on vast and ongoing infrastructure spending to bring its workers in from up to an hour or more away in suburbs around London. Within or without the UK, Wales should stake a claim to be different, economically, and socially more equal, and be more insistent in its demand for resources to secure this.

Chronic weaknesses suggest Wales needs a new route out and must use whatever means or policies it can, to develop the more advanced and better-balanced economies that, for example, Ireland and the smaller Scandinavian countries, have created. The group of small nations and regions offering models to which Wales might aspire enjoys a much healthier balance between manufacturing, agriculture, services, and educational activities. They are also much more successful exporting economies, more fully integrated into world supply chains than most of Welsh business. Much smaller gaps exist between the rich and the poor in populations that are much wealthier than Wales. They benefit, too, from strong social cohesion.

They have grown to overtake Wales in wealth since World War Two but are also among the happiest of nations. The recent World Happiness Report, using GDP, income, life expectancy, social support, and freedom from corruption as measures, put Finland (population 5.4m) in top place for the third year running, and it was joined by other smaller countries Denmark 5.7m, Switzerland 8.6m, Iceland 0.34m, and Norway 5.7m in the next four places.[14]

[14] It is fair to point out that the UK was the highest placed large population country at 13th, ahead of Germany 17th, the US 18th, Japan 62nd and China 94th. https://worldhappiness.report

Moderate social democratic systems and policies as practised in Scandinavia, including higher tax and social security spending, are much better aligned, too, with historic Welsh sensitivities than the current centrifugal left and right policies that are the main offerings in Britain.

Positive and Negative

Wales is often compared with the North East England and Northern Ireland, other relatively poor regions of the UK.[15] Yet this habitual linkage is in danger of offering Wales too comfortable a set of comparisons. Wales will sometimes do worse than its fellow-laggards and sometimes better but there is almost a sense of re-assurance that by and large all three remain locked together in their basement status with none capable of advancing to greater prosperity vis à vis the rest of the UK.

In many ways the other two regions have as many differences from Wales as similarities and do not offer what could be a more revealing comparison of Welsh performance. Northern Ireland has a smaller population (roughly half that of Wales), is separated by sea from the rest of the United Kingdom and has a history and politics shaped by sectarian division. It also has a different industrial history, not shaped by coal or steel but by shipbuilding, engineering and textiles, especially linen.

The North East shares much of Wales's industrial heritage as an important coal and steelmaking centre but has also had other staples, such as shipbuilding and boiler making, both absent from Wales. Following investment several decades ago by Japanese carmaker Nissan, the English region has a significant car components and assembly sector. It is geographically different (largely flat) and, to some extent, climatically different (drier and colder) and has neither the heavily indented coastline nor the mountainous nature of Wales. It is further from the south east of England, close to northern Europe across the North Sea and has an even greater share of its population concentrated in two cities and one town along a narrow stretch of coastline.

Wales and the West

There is another much closer region, and in competition with Wales, with which it is rarely compared. The South West (population 5.5m.) shares a west facing attitude, a long, in

[15] Scotland used to be in this lagging group but, helped in part by oil and strong financial services, educational and tourism sectors, has managed over the past two decades to elevate its position and now ranks among the more prosperous parts of the UK.

places rocky and indented coastline, and a similar climate.[16] There are other likenesses that suggest the two regions ought to be broadly comparable or at least more often compared. They are home to large number of retired people and others who have migrated in to lead the quieter life that less densely populated areas can offer. Much of Britain's military infrastructure is in these two parts of the UK: Army training on Salisbury Plain and in the Brecon Beacons, and large defence manufacturers in Bristol, Somerset, and Gloucestershire and in south-east Wales.

The aviation industry is important to both economies. They are home to engineering and food processing and have significant agricultural sectors with an emphasis on dairy and sheep farming, and are heavily dependent, especially in their more westerly parts on tourism.

They have also had areas - West Wales and the Valleys, and Cornwall - that have qualified for EU Objective One support to redress ongoing poverty. Both have infrastructure deficiencies, areas of the South West – parts of North Somerset and Cornwall - being as devoid of rail connections as some areas of Wales. Motorways in both regions extend only so far and miss western extremities. Rail electrification from London stops short in both, too.

There are also substantial differences. The South West has a population more than two-thirds greater than Wales The West does not share Wales's coal and steel industrial legacy (except to a limited extent in Somerset and the Forest of Dean) and has not had to deal to the same extent with the problem of replacing traditional employment mainstays, apart from mining in Cornwall, or, in the case of Plymouth, reduced naval operations.

It also has big population centres in Plymouth, Exeter, Bath, Gloucester, Cheltenham, Bournemouth, Poole, Swindon, and Bristol, plus smaller but still medium-sized market towns, such as Taunton, Devizes, and Salisbury. As such, it enjoys some scale benefits that are not available to Wales, which possesses

[16] The South West of England is defined as the counties of Devon, Cornwall, Dorset, Somerset, Wiltshire, Gloucestershire, and Bristol.

just four cities and towns of any magnitude. The easternmost parts of the South West also have the advantage of being contiguous with the richer south-east and enjoying shorter travel times to London, forming a part of its wider economy as a result.

Bristol has also long housed a bigger financial and professional services sector than Cardiff, which to some extent also serves the south Wales market, as well as more significant IT and high technology sectors. The West of England’s capital, too, by virtue of its advantageous crossroads position on the motorway and rail network (and bigger population than Cardiff) has established itself as the main transport and distribution hub for south west Britain, securing a lead it will now be hard for its Welsh rival to rein in.

Its airport, which until a few decades ago had roughly similar passenger numbers, has begun, because of low-cost airlines basing their regional operations there, to dwarf its Welsh rival, climbing to 8m passengers a year, more than four times Cardiff Airport’s total. Many of those using the airport travel across the Severn Bridge to take advantage of a much wider range of destinations.

Nevertheless, the similarities between the two areas are enough for it to be important to try to understand why one side of the Severn has prospered while the other has lagged. Why did one achieve a gross domestic product of £28,231, sixth among UK economic planning regions, whereas Wales was in 10th place ahead of only the North East on £23,866?[17]

Table 1. UK Regional GDP 2018

	Total GDP £bn	GDP per head £	Population m.	Rank
UK	2,140.3	31,976	66.4	-
Wales	74.9	23,866	3.1	10
England	1,839.3	32,857	55.9	-
-North East	62.6	23,569	2.7	11
-North West	207.4	28,449	7.3	5
-Yorks. & Humb.	141.7	25,859	5.5	9

[17] Northern Ireland, despite its many problems has improved its relative ranking over recent years.

-East Midlands	124.6	25,946	4.8	8
-West Midlands	159.8	27,087	5.9	5
-East of England	186.4	30,069	6.2	3
-London	487.1	54,686	8.9	1
-South East	311.3	34,083	9.1	2
-South West	158.1	28,231	5.6	6
Scotland	161.3	29,660	5.4	4
Northern Ireland	48.9	25,981	1.9	7

Source: ONS

Business scale

The annual top company listings for Wales and South West England from publisher, *Business Insider*, provides some clues. The tables and commentary that follow do not make comfortable reading for Welsh people proud of the country's place in industrial history, but they demonstrate just how far Wales has retreated in economic importance, and as such are an indicator of the task ahead if Wales is to grow in line with other more prosperous regions as an advanced industrial economy offering a high standard of living to its inhabitants.

There are some caveats. The Business Insider rankings use a formula that combines turnover and profit to rank companies. As a result, some companies that are going through less profitable times appear lower down the list than their turnover would imply. Dwr Cymru and Deeside food retailer Iceland both fail to appear in the Insider's top 50 because profits in the year under review were low, even though turnover alone would place them in the top 10.[18]

Insider also only lists companies where these figures are broken out for the region concerned. Others that offer consolidated figures are absent – notably in Wales Indian-owned Tata Steel, Toyota's engine plant and Franco-German-

[18] A further complication is different year ends, so companies in both listings are compared with others reporting earlier or later in the same or succeeding years. The Western Mail/WalesOnline has produced a different ranking of the top 300 Welsh businesses based on turnover alone for more than two decades. Iceland is ranked at number two in the most recent listing behind Admiral. Dwr Cymru was in fifth place. https://www.business-live.co.uk/economic-development/wales-top-300-2019-biggest-17396726

Spanish partnership, Airbus (which is listed through its UK headquarters in Bristol). There will also be omissions from the South West list for similar reasons, so the figures present an incomplete but nevertheless broadly equivalent picture of both economies.

As Table 2 shows, however, a wide disparity exists between the size of companies in the two regions. The South West's biggest company is a tobacco and related products multinational, Imperial Brands. It had a worldwide turnover of more than £30bn in its most recent financial year (albeit not in a sector which enjoys general approval). Wales's standard-bearers, Iceland and its only FTSE 100 company, Admiral Insurance, posted much more modest turnover - £3.01bn and £2.53bn, respectively. The South West is also home to no fewer than three more £5bn plus companies, five with a turnover of between £2bn and £5bn and 13 between £1bn and £2bn.

In Wales Admiral and Iceland are followed in size by GE Aircraft Engine Services as the only other £2bn plus company and by Redrow (£1.9bn) but the drop is then precipitate to two companies with a turnover of between £500m and £1bn (Calsonic and Dow Silicones). A further 24 Welsh businesses within the top 300 report turnover between £200m and £500m, making them substantial but still by international standards modest. In the South West list 12 companies in just the Top 100 have a turnover of between £500m and £1bn and 27 are in the next tier from £200m - £500m

Table 2. Top 20 Companies: Wales and South West

	Wales	**£m Turn-over**	**£m Profit**	**South West of England**	**£m Turn-over**	**£m Profit**
1	Admiral	2528	476.2	Imperial Brands	30,524	1823
2	Redrow	1920	380	Nationwide	5.590	833
3	GE Aircraft Services	2383	138.3	Dyson James	4.401	750
4	Wales & West Gas	425	99.5	Sensata Technologies	2773	428.5
5	Moneysupermarket	329.7	96.1	Intel Corp	5257	180.6

	.com					
6	Calsonic Kansei	805.7	18.9	Western Power Distr.	1685	733.2
7	First Hydro	266.48	72.2	Meggitt	2080	216.1
8	Kingspan	351.8	39.7	Merlin Entertainment	1688	285
9	Watkin Jones	301.9	43.3	EDF Energy Nuclear	2446	158
10	Ipsen Biopharm	267.8	52.5	Pennon	1478	260.3
11	Orthoclinical Diagnostics	245.9	54.9	Screwfix[19]	1683	170.1
12	Dow Silicones	518.2	13.6	Spirax Sarco-	1153	288.8
13	SPTS Technologies	204.7	69.7	AES Overseas	905.4	319
14	Principality Building Society	233.2	40.7	Cotham	1863	71
15	Vauxhall Finance	184.9	36.6	WH Smith	1262	134
16	Converter	167.1	43.1	Allstar Bus. Solutions	1852	70.1
17	Day's Property Holdings	210.1	7.1	Zurich Assurance	1013	190
18	Huws Gray	182.7	25.3	Mitie	2221	36.4
19	GoCompare	149.2	34.9	Norton	942.7	74.4
20	Kronospan	360.8	8.8	Arval UK	1132	60.6

Source: Business Insider/Rhys David

Table 3. Turnover at different points in the list

Position In List	**Wales**	**£m Turn-over**	**£m Profit**	**South West of England**	**£m Turn-over**	**£m Profit**
50	MVH	95.6	7.1	West UC	186.5	58.1
100	EKF Diagnostics	41.6	4.3	Wainhomes	82.0	17.1
150	Mayr Melnhof Packaging	56.9	1.1	Interfish	53.6	14.5
200	Dauson Environmntal	25.8	2.0	Good Energy	116.9	2.3
250	BECT Building Contractors	27.6	0.8	Teleperformance	49.5	3.1
300	Carl Kammering	17.8	1.5	DCM (Cornwall)	57.6	1.6

Source: Business Insider/Rhys David

Many of the names in the South West top 20 are global or British brands enjoying widespread recognition - the likes of

[19] Part of Kingfisher Group, also owner of B&Q

Nationwide Building Society, Dyson, W.H. Smith, McCarthy & Stone, Screwfix Direct, and US-owned Intel. Further down the list other big companies - Honda, C&J Clark, McCarthy & Stone, and others – with a direct link to the consumer are to be found.

Few in the Welsh list have the same visibility, certainly outside Wales: Admiral in little more than 20 years has built a successful UK and European business; and grocery retailer, Iceland (with a turnover of £3bn), and washroom and hygiene services provider PHS £262m) are omnipresent across much of Britain.

The two Welsh-based builders, Redrow and Watkin Jones operate across England and Wales; Welsh-based companies, such as Castell Howell and Wynnstay have built up operations beyond Wales; there has been UK-wide success in comparison websites (GoCompare, Moneysupermarket.com and Confused.com); JoJoMamanBebe flies the flag in general retail.[20] Beyond these, however, examples are hard to find.

Iceland excepted, there is no Welsh Greggs (from the North East), Morrisons, (Yorkshire), Next (East Midlands) or Stagecoach (Scotland) to name only a few regionally based UK companies with a big national footprint. This absence of Welsh brands with a big market presence is, as a report by academics for the IWA in 2015 noted, quite striking.[21]

The disparity in the size and scope of Welsh and South West businesses is also reflected in public listings (Table 4). Only 16 companies in Wales are listed, five on the main London Stock Exchange and a further eleven on the junior market, Aim, the smallest number for some time.

Only two companies, Brickability in Bridgend, and Diurnal, the Cardiff pharmaceuticals group, have joined Aim in the past year, replacing Amerisur Resources, the Cardiff-based oil exploration company acquired by Latin American company Geopark, and Dee Valley Water, taken over by Severn Trent Water.

[20] The company's headquarters are in Newport. Buying, design and marketing are in Battersea, London.
[21] *An Economic Strategy for Wales.* p17. Williams K., et al. IWA, Cardiff. 2015

Imperial Brands with a market capitalisation at the time of writing of around £20bn has a higher value than all Welsh quoted companies together, and Admiral – market capitalisation around £8bn - exceeds the combined total of all other Welsh listed firms.

Table 4. Listed Companies South West and Wales

South West	**(Top 100 companies only)**	**Wales**	**(All companies)**
LSE	**AIM**	**LSE**	**AIM**
Imperial Brands	Wincanton	Admiral	Watkin Jones
Pennon	Hargreaves Lansdown	Redrow	Wynnstay
Screwfix Direct*	McCarthy & Stone	Money-supermarket	IQE
Spirax-Sarco	Mears		Finsbury Food
WHSmith	Redde Northgate		EKF Diagnostics
Mitie	Amigo		Diurnal
Rotork	Avon Rubber		Brickability
First Great Western*	Bristol Water		
Renishaw	Ecclesiast. Insurance		
	Alliance Pharma		
	Curtis Banks		
	Gooch & Housego		
	Cambria Automobiles		

Source: Business Insider/Rhys David

There are other important differences. The representation of companies in modern sectors and especially those close to consumers is much stronger in the South West list than in Wales (Table 5). Retail is represented by shoe company C&J Clark, clothiers Superdry, Steinhoff (the firm behind Poundland, Harveys Furniture, Benson for Beds, Pep & Co, and Sleepmasters), and fashion accessories group Mulberry, and

food and drink by Neal's Yard, Yeo Valley, Wyke Farms and vintners Matthew Clark Bibendum among others.

The region is the base, too, for leading investment platform, Hargreaves Lansdown, and investment advisers St. James's Place; for other financial services businesses involved in motor leasing (Arval owned by BNP Paribas and Allstar, a subsidiary of Fleetcor of the US); insurance multinational Zurich Assurance, and various investment companies and financial operators not included in the list such as US share registrars, Computershare.

The prominence these service sectors enjoy across the region is important. They support a local ecology of jobs and professions, from designers, marketeers, logistics and distribution specialists, and information technology companies to shopfitters. Higher level financial services, such as investment management, offer high wage employment to talented and skilled graduate employees, able to analyse company performance worldwide and to construct and market portfolios to customers.

Table 5. Wales and the South West's Top 50 business activities

Sector	Wales	South West
Engineering, Steel	Calsonic Kansei, Celsa, Liberty Steel, Ifor Williams Trailers, Cequent	Dyson James[22], Spirax Sarco, Rotork, Renishaw, Honda
Other Manufacturing	Kingspan, Dow Silicones, Kronospan, GS Yuasa, Notemachine, Advanced Elastomer Systems, Wepa, Panasonic, IG Design, Nice-Pak, Premier Forest Group, Seda.	C& J Clark, Norbord, Etex, Corialis
Transport, Distribution		First Great Western, Wincanton, Redde Northgate
Defence, Aviation	GE Aircraft Engine Services, British Airways. General Dynamics, British Airways Engineering[23]	Meggitt, Cobham, Safran Landing Systems, Devonport Royal Dockyard, GE Aviation Systems
Technology	SPTS Technologies, IQE, Newport Wafer Fab	Sensata, Intel
Health, Pharma, Life	Ipsen Biopharm, Orthoclinical Diagnostics, Convatec, Qioptic	Pantheon UK, Accord-UK.

[22] Dyson moved its headquarters to Singapore in 2019 but retains 4,500 jobs in the UK, a significant proportion of which are in research and development.
[23] General Dynamics and British Airways Engineering are not included in the Insider Wales Top 300.

Sciences		
Construction	Redrow, Watkin Jones, G. Walters (Holdings)	
Utilities, Oil & Gas	Wales & West Gas Networks, First Hydro, Dragon LNG, South Hook LNG Terminal.	Western Power Distribution, EDF Energy Nuclear Generation, Pennon, Wessex Water, Magnox
Financial Services	Admiral, Moneysupermarket.com, Principality Building Society, Vauxhall Finance, GoCompare,	Nationwide, Allstar Business Solutions, Zurich Assurance, Arval, Hargreaves Lansdown, Amigo, ALD Automotive, Openwork
Investment, Property	Bailey Family Investments, Gwent Holdings, Shaw Healthcare, MVH	AES Overseas, Mears, McCarthy & Stone, Norton, Richmond
Outsourcing		Mitie, Aspire Defence
Food & Drink, Tobacco	Finsbury Food	Imperial Brands, Nutricia, Wrigley
Leisure, Media	Swansea City FC, Travelbag	Merlin Entertainments
Retail, Wholesale	Day’s Property Holdings, Huws Gray, Wynnstay, Sinclair Motor Holdings, Brotech, Ralawise,	Screwifx, WHSmith, Lush Cosmetics, Key West

Source: Business Insider/Rhys David

The same will be true of headquartered companies. Both listed and privately held companies in the South West will generate a demand for the professional services of lawyers, accountants, management consultants, marketing and personnel specialists, and in the case of manufacturing, for transport, logistics and many other services as well, all of which help sustain a thriving, mixed local economy.

With this strong business framework in existence the South West of England has unsurprisingly become the location of choice for the headquarters in south west Britain as a whole of utility companies, including Magnox, Western Power Distribution, Ovo, EDF Energy Solutions, as well as hosting three regional water companies, Wessex Water, Pennon and Bristol Water.

It also has strengths in advanced modern manufacturing, especially aviation and defence, through Airbus, French-owned Safran, Italian-owned Agusta-Westland, Babcock (operator of the Royal Dockyard in Devonport), Meggitt and Cobham, and in engineering (Renishaw) with accompanying senior management roles in most cases. Because of its strong position

as a military supplier the region also benefits from strong flows of Government research and development funding. The South West of England also houses the Government Communications Headquarters (GCHQ), a big employer of skilled analysts and support staff in IT and elsewhere. Such a presence helps to attract other well-qualified people to the area and to engender private sector spin-offs.

Welsh strengths and weaknesses

Wales has a growing strength in some of these modern sectors. The digital economy, for example, is calculated by the Welsh Government to employ about 44,000 people. Technology stars include IQE, the products of which are vital to mobile phones, Newport Wafer Fab, and Israeli-owned semi-conductor manufacturer SPTS Technologies. There is a growing expertise in niche areas such as data security.

The increasingly important health sector is also represented through international companies such as GE Healthcare, Thermo Fisher Scientific, and Siemens, domestic champions such as EKF Diagnostics and a growing number of small start-ups and university spinouts. US-owned OrthoClinical Diagnostics has been building antibody tests for Covid-19.

Much of the sector, however, performs basic manufacturing, and offers less than might be hoped in the way of locally centred senior management or research and development. The world’s big pharmaceutical companies since the departure of Parke-Davis and Johnson & Johnson are no longer represented in Wales, and the increasing trend is for these big companies to want to be close to world-class research facilities - the Oxford-London-Cambridge arc in the case of the UK, and similar clusters of expertise elsewhere in Europe.

The Fintech sector has grown, too, notably investment manager, Wealthify, (now majority owned by the Aviva insurance group) challenger bank, Starling, Delio, Amplyfi, and others, to complement the main Welsh financial services companies, Admiral, Principality Building Society and Hodge. There are also substantial financial back-office operations -

insurance group Legal & General and Lloyds Bank Group especially in Cardiff and Newport. Employment in the main financial services centre in Wales – Cardiff – is dwarfed, however, by the totals in Edinburgh, Manchester, or Bristol.

Across a whole range of modern sectors, therefore, Wales faces a considerable task in increasing its representation and in scaling up its businesses. Representation in modern sectors is at best patchy and often unaccompanied by the higher-level ancillary services that come with international or regional headquarters functions and hence less rooted.

Wales has made some progress in recent years in developing such more "grounded" companies – an important ambition of Welsh Government, and financial and other support is now available through Banc, (the Development Bank of Wales), the big banking groups, accountancy firms and consultants to help such companies with growth, succession planning and other issues. (Table 6)[24]

However, only one third of Wales's top 100 companies can be considered as grounded (and remain constantly vulnerable to acquisition by bigger groups elsewhere), compared with more than half of those in the South West list. Wales also has fewer overseas investors from France, Germany, or the US than the South West but two more from Japan.

Table 6. Top 100 Ownership

Wales	**No.**	**South West**	No.
Welsh-grounded	34	South West Grounded	53
Rest of UK	10	Rest of UK	6
United States	18	United States	20
Japan	5	Japan	3
France	3	France	6
Italy	3	-	

[24] Grounded means here a company owned or largely owned and headquartered in Wales offering a range of employment opportunities and motivated to remain and develop as part of the Welsh economy.

Germany	2	Germany	4
Luxembourg	5	Switzerland	2
Ireland	3	Belgium	2
India	2	Canada	2
Austria, Belgium, Bermuda, Canada, Denmark, Israel, Jersey, Hong Kong, India, Netherlands, Reunion, Qatar, Singapore, Spain, UAE	1 each	Ireland Finland	1 each

Source: Business Insider/Rhys David

Few Welsh companies, too, are large-scale employers, in sharp contrast with the picture fifty years ago in 1970 when the coal industry still employed more than 50,000, steel more than 70,000, and many individual mining and steel sites offered work to thousands. There are still substantial concentrations in a few manufacturing companies – Airbus, Tata, Finsbury Food, Calsonic, Celsa and GE Engine Aircraft Services - but many of the previous biggest employers have left.

The Welsh company with the greatest number of employees is Iceland but most of its workforce is based in England in the company's retail outlets. Other concentrations of employment are found in the service sector in Swansea cleaning group, Solo, Cardiff-based UK care home provider, Shaw, hospitality group Brains and in call centres.

More than a quarter of all Welsh workers, however, are employed in the public sector, in the National Health Service, local government and Government agencies such as DVLA, the Business Statistics Office, and HM Revenue and Customs. By their very nature they will not be seeking to increase employment. Computer technology and artificial intelligence will put downward pressure, too, on the number of jobs such institutions will offer in the future, combined with Government efforts to secure ongoing efficiencies. and cut costs.

Table 7. Wales Big Employers

Top 300 Rank	Company	Sector	No. of Employees	Location
259	Iceland	Retail	15,634	Flintshire
1	Admiral	Financial Services	10,199	Cardiff
261	Glas Cymru	Utility	3,837	Merthyr Tydfil
284	PHS Group	Retail, Services	3,428	Caerphilly
184	Solo Service Group	Retail, Services	3,345	Swansea
45	Shaw Healthcare	Property	3,272	Cardiff
274	Pioneer UK Midco	Health	3,121	Cardiff
38	Finsbury Food	Food	2,988	Cardiff
291	Brains	Retail	2,460	Cardiff
2	Redrow	Construction	2,308	Flintshire
6	Calsonic	Engineering	2,161	Llanelli
293	Safran Seats	Manufacturing	2,060	Torfaen
4	Wales & West Gas Networks	Utility	1,406	Newport
295	Masco UK Window	Manufacturing	1,367	Rhondda
28	Celsa	Engineering, Steel	1,249	Cardiff
292	J.H. Leeke	Retail	1,201	Rhondda
14	Principality Building Society	Financial Services	1,151	Cardiff
3	GE Engine Aircraft Services	Defence, Aviation	1,138	Cardiff
25	Wynnstay	Retail	1,063	Powys
63	Celtic Manor	Retail	1,040	Newport
77	HBL Holdings	Leisure	1,021	Conwy

Source: Business Insider/Rhys David

Table 8. Welsh Top Companies Employment by Number of Employees

Employees by number	1-50	51-100	101-500	501-1000	1001-10000	10000	n/a
Number in companies Top 100	3	11	42	30	11	1	2
Top 100-300		1,001 - 5000	2001-3000	3001-5,000	5001-10,000	+10,000	
		9	5	5	0	2	

Source: Business Insider/Rhys David

Though comparisons are not made here with companies in the South West, it is almost certainly the case that the export propensity and overseas earnings of Welsh businesses is

significantly lower as Tables 9 and 10 show. Wales's exports to the EU look impressive and on paper Wales has a higher proportion of its trade with the EU than the rest of Britain. The figures are flattered, however, by a small number of high value products such as the export of wings from Airbus's Flintshire plant to France. Indeed, the bulk of Welsh exports are provided by a small number of big companies such as Airbus, Toyota, and soon-to-depart Ford supplying intermediate goods.

Table 9. Wales Top Exporters

Company	**Export Sales 2019 £m.**	**Export Sales 2018 £m.**
GE Aircraft Engine Services	2087.69	2063.77
Calsonic	164.54	166.6
Ipsen-Biopharm	264.7	173.0
Ortho-Clinical Diagnostics	231.1	191.0
Dow Silicones	421.7	462.8
Convatec	105.7	96.8
Kronospan	110.6	111.4
GS Yuasa	149.4	127.4
Celsa	91.0	81.7
Newport Wafer Fab	-	120.0
Liberty Steel	190.8	134.9
Premier Forest Group	65.6	56.3
Panasonic		206.4
Nice-Pak	99.4	111.4
Qioptic	62.23	49.7
Ifor Williams Trailers	74.02	-
Cequent	120.1	124.0
Hexion	59.2	42.9
Biomet	90.1	90.8
Aerfin	55.9	57.7
Norgine	63.16	63.01
First Hydro	66.59	52.7
Harris Pye	54.77	59.97
Safran Seats	172.7	161.1
Pioneer Midco	350.24	-

Source: Business Insider/Rhys David

The destinations of Welsh exports (Table 10) suggest some modest successes. Half of Wales's export sales to the Irish Republic, however, come from petroleum products, presumably oil landed at Milford Haven, refined there, and shipped onwards without contributing significantly to Welsh GDP or employment. Altogether a total of 25 companies had export earnings more

than £50m but 187 of the Top 300 companies were not engaging in any export activity.

Four products - transport equipment (aircraft wings and seats and vehicle engines predominantly), petroleum, power generating machinery and equipment, and steel - represent more than half of Wales's exports. Medicinal and pharmaceutical products increased by an encouraging 21 per cent between 2018 and 2019 feature in the top ten but food products, another area where a strong Welsh involvement might be expected, do not.

The unpalatable truth is that many of Wales's exports come from sectors that look vulnerable to retrenchment at least, particularly after the pandemic. The impact of Covid-19 on the aviation industry, with demand for flights not expected to return to previous levels until 2023 at the earliest, will affect aircraft orders, as too might departure from the EU, and the Welsh steel industry's future looks precarious if funding from Government is not forthcoming.[25]

Table 10. Wales's main export markets

Country	**Sales bn 2019**	**Sales bn 2018 bn**	**Country**	**Sales bn 2019 bn**	**Sales bn 2018 bn**
Germany	2.87	3.12	Belgium	541	569
France	2.81	2.68	Spain	464	492
US	2.74	2.44	UAE	463	498
Ireland	1.68	1.51	China	407	379
Netherlands	969	746	Turkey	339	337

Source: Welsh Government/HMRC

Table 11. Wales's main export categories

Product sector	**2018 £m**	**2019 £m**
Transport Equipment	4,166	4,207
Petroleum, Petroleum Products	2,226	2,377
Iron & Steel	1,917	2,228

[25] An independent Wales would, of course, be able to include England in its export figures but these would have to be balanced against imports coming the other way.

Power Generating Machinery	978	923
Electric Machinery, Apparatus	760	804
Medicinal & Pharmaceutical Products	628	760
Road Vehicles,	594	585
Scientific Apparatus	424	492
Miscellaneous Manufactured Articles	477	435
Chemical Materials & Products	386	427

Source: Welsh Government/HMRC

The switch to electric vehicles – the top two selling cars in the UK in March were electric – does not bode well for Wales's substantial involvement in engines and engine components, or for Aston Martin's car manufacturing operations in St. Athans. Wales is locked into a part of the automotive sector with declining domestic and export opportunities and needs to gain a stake as a participant in one or other of the stages in electric vehicle manufacture or in battery making.[26]

The purpose of these comparisons with the South West and of this analysis of Welsh business scale and constituents is not intended to downplay or disparage the often-heroic efforts of Welsh businesspeople. Different territories have different histories. Bristol has played an important role in the development of the British economy since the 16th century when the city was the second wealthiest (and biggest) after London. It has a history of importing goods such as tobacco, wine and foodstuffs that goes back several centuries and its present pre-eminence in the south west arises out of this legacy. Nevertheless, by examining our neighbouring economy, the length of the road Wales must travel to replicate its success becomes clearer.

Yet, while Wales was much later than Bristol and the South West in becoming a developed economy it still failed to build on the strong global position it had in the late nineteenth and early twentieth century as the then world's energy capital and an exporter to markets across the world. This era did not produce downstream industries or service sectors alongside the dominant coal and steel sectors, or even a modest number of

[26] Electric car pioneer, Elon Musk, is reported to be looking for a site for a second so-called giga-factory in Europe to complement his Tesla company's investment in Berlin. Wales could offer itself as a candidate.

public limited companies. This legacy has remained an influence.

The failure was partly the result of much of the capital, ownership and investment in Welsh resources and the means and drive to exploit them – with a few notable exceptions such as David Davies of Llandinam's Ocean Coal Company – being largely derived from outside Wales. Even today Wales's biggest company, Admiral, has been built in little more than two decades by non-Welsh investors and it is arguable this inherited dependence on external actors that has shaped Wales's present economic structure remains. The absence of a larger coterie of entrepreneurs, or at any rate entrepreneurs who would start and maintain their businesses in Wales has, however, been unfortunate.

The luck of the Irish

Yet, if comparisons with the South West are unflattering to Wales, those with another near neighbour, Ireland, that Wales might aspire to be more like are even more invidious. It is not an unrealistic ambition to want to go further than match the South West but to create a new Wales that will replicate the successes of other smaller advanced industrial nations and regions.

Wales should want to command a much more prominent place on the world stage, as well as offering its people enhanced lives, economically, politically, and culturally. Just how far we are from this is sadly evident from a brief survey of comparable numbers relating to Ireland.

In only 30 years a previously chronically poor Ireland has transformed itself into one of the richest countries in the world (though the crude figures for Irish GDP must be qualified with strong provisos).[27] Success has come through the abandonment of previous self-reliance policies and high levels of public sector employment and the adoption of an open economy approach designed to attract multinationals and promote competition.

[27] Irish GDP is skewed by multinational revenues that in many cases have little direct impact on the economy. The Irish Government in 2017 introduced a new measure, Modified Gross National Income, which reduces real Gross Domestic Product by one third. This still leaves Ireland with output levels roughly equivalent to Germany.

This is not to say the Irish economy has not had and continues to have significant weaknesses, including a tendency to boom and bust, and high levels of public and private indebtedness. Before the financial crash of 2008 an emergency package of loans by the EU, and the IMF, (with the UK also contributing) was needed to stave off the collapse of Ireland's banks which had over-extended because of loans to the property sector.[28]

Investment in education has been key to Ireland's success, creating a skilled and often language-qualified workforce for incoming companies. Other Irish policies – notably its generous business tax regime - have been at the expense of its EU partners. Since joining the EU it has been allowed to become the world's leading tax haven and as a result has succeeded beyond all expectations in attracting mainly US, high level pharmaceutical, medical device, chemical, computer hardware and software technology, and other groups seeking to shelter their tax from both the US and other countries in which they are based or operate.

The policy over the past decade has been challenged first by Brazil, which blacklisted Ireland, and has also produced pushback from the EU and the US. Washington has changed its own tax laws in response to the loss of tax revenues from some of the country's biggest and most profitable technology and pharmaceutical companies. Ireland has, however, already reaped the benefits. The investing companies have been locked into its economy, their investments including in many cases higher value manufacturing and service activities and not just production from the start.

The first three spots in Ireland's list of top companies are occupied by US technology companies Apple, Google, and Johnson Controls. Other American companies in the top ten are Medtronic, Facebook, Eaton Corporation, Thermo King, and Allergan. Further down the list come a roll call of leading US technology, financial and pharmaceutical businesses – Ingersoll-Rand, Dell, Merck, Oracle, Pfizer, Sandisk, Experian, Boston Scientific, Adobe, Abbott Laboratories, Intel, AirBnb and

[28] Irish banks' international bond holdings had exploded from €16bn in 2003 to €100bn in 2007 mirroring a similar increase in property lending.

Amazon. New and existing investors are being drawn through an Advanced Technology Building programme designed to bring jobs to the remoter parts of the country.

Admittedly, some of the investing companies, have a limited impact on the real Irish economy, the operations acting mainly as a means of collecting and transferring revenues from subsidiaries in other parts of Europe. Others, particularly the pharmaceutical companies have chosen, however, to put in place significant research and development activities.

The country’s very successful foreign direct investment policies of the past five or six decades have thus succeeded in attracting high-skilled and high wage employment for its relatively young population and in the process slowed down emigration to the UK, the US, Australia and other countries that are home to the large Irish diaspora.

This aggressive use of taxation policy countenanced until recently by a compliant EU has enabled Ireland to build up a huge $1.54 trillion stock of foreign direct investment and become the world’s leading destination for high value overseas investment, around 80 per cent deriving from the US. According to OECD estimates foreign multinationals provide 47 per cent of employment in Irish manufacturing and 28 per cent of employment in Irish services.

By turnover 14 of Ireland’s top 20 companies are US multinationals, employing a quarter of the private sector workforce and paying 80 per cent of corporation tax. The Irish inward investment agency IDA Ireland estimated in 2017 that multinationals, the vast majority from the US, contributed €28.3bn to the Irish Exchequer in taxes.

Nevertheless, it is not the only leg on which the Irish economy stands. Irish-owned businesses are well spread throughout the list of the 100 biggest companies. Ireland, as Table 12 shows, has spawned its own multinationals, some stemming from the building industry – long a specialisation of the Irish – and others in the agribusiness sector where Ireland has become a world-scale food processor and exporter, with extensive processing

facilities turning local produce into food in several other countries, including Wales and the rest of Britain.

The impressive roster of domestically owned Irish companies, many of them quoted on stock exchanges in London, New York and Dublin have been mainly the result of entrepreneurial initiatives by Irish individuals, and in a few cases deliberate action by the Irish Government.

Table 12. Ireland's Top Companies

Rank	Company	Turnover Euro Bn.	Sector	Rank	Company	Turnover Euro Bn.	Sector
4	CRH	26.8	Manufacturing	32	Musgrave	3.9	Retail
8	DCC	17.2	Services	44	Glanbia	2.4	Food
15	Smurfit Kappa	8.9	Manufacturing	49	Paddy Power Betfair	2.2	Retail
16	Ardagh Glass	8.1	Manufacturing	50	Ornua	2.1	Food
18	Ryanair	7.6	Transport	53	Dawn	2.0	Food
19	Eirgrid		Utility	56	Applegreen	1.9	Retailing
22	Kerry	6.6	Food	65	Greencore	1.6	Agrifood
25	Total Produce	5.0	Food	67	C & C	1.6	Beverages
26	Penneys	4.7	Retail	70	Bwg	1.5	Food
28	Kingspan	4.4	Manufacturing	75	Dunbia	1.3	Food

Source: Irish Times Ireland's Top 1000 Companies

Some sectors have developed, too, outside traditional Irish specialisms. The country is the world's leading lessor of aircraft managing 22 per cent of the fleet of aircraft worldwide, and forty per cent of all those leased (and not owned by the airline

companies themselves). Fourteen of the top five lessors in the world are based in Ireland. Ireland's favourable tax regulations have again helped to drive this growth. Most aircraft lessors can reduce or cancel out their Irish taxable profits by use of allowable tax deductions and structuring. The cost of an aircraft can be written-off against tax at a rate of 12.5 per cent over 8 years.[29]

The leading Irish companies have grown to international scale by looking outside the confines of their country's 5m population and by using neighbouring UK as an extension of their home market. The biggest Irish company, CRH (formerly Cement & Roadstone Holdings) has a major presence in Britain through its Tarmac subsidiary, to which it has recently added Welsh civil engineering contractor, Alun Griffiths in 2019.

It has gone much further, too, in its 50 years of existence, becoming the largest supplier of building materials to the construction industry in the US, and operating in Europe and Asia. Dublin-based retailer Penneys (part of British plc Associated British Foods) is the headquarters operation for the successful fashion chain, Primark, with branches in the UK, the US, and other parts of the world.

Ryanair has become basically a British airline domiciled in Ireland, carrying more passengers than British Airways, Air France-KLM, or Lufthansa to become Europe's biggest airline. Two of the biggest Irish agri-foods businesses – Dunbia and Glanbia – process much of Wales's agricultural output, the former (a Northern Ireland company) having bought Wales's biggest sheep processor, Oriel Jones a'i Fab, in Llanybydder.

Irish energy company Petrogas, through its Applegeen subsidiary, now operates petrol stations across the UK through its 55 per cent stake in the Welcome Break chain of motorway service stations, as well as having its own branded outlets on main roads. British motorists filling up at Applegreen's stations, including Welcome Break, are now contributing to Ireland's

[29]https://www.mooreireland.ie/MediaLibsAndFiles/media/nathansweb.moorestephens.com/Publications/Tax-Treatment-of-Aircraft-Leasing-in-Ireland.pdf

overseas earnings. It has now expanded across the Atlantic to the US.[30]

In short, Ireland has strong manufacturing businesses, a dynamic food and agribusiness sector, sophisticated health, pharmaceutical, and technology businesses as well as important retailing, transport, and construction businesses – just the sort of profile Wales needs.

Table 13. Employment in Ireland by Key Sector

Sector	Nos. Employed	Sector	Nos. Employed
Aircraft leasing	1,200	ICT	37,000
Alcoholic Beverages	92,000	Medical Technologies	25,000
Engineering	18,500	Pharmaceuticals	50,000
Financial Services	35,000	Software	24,000

Table 14. Business Representation by Sector: Ireland Top 1000

Sector	No. of Companies	Sector	No. of Companies
Retailing	184	Transport	97
Manufacturing	136	Construction	95
Food	125	Pharmaceuticals	86
Business Technology	119	Agribusiness	65
Health	99	Consumer Technology	61

Source: Irish Times Ireland's Top 1000 Companies

Ireland's exports, too, are hugely impressive. Set against Welsh exports of £17.7bn in 2019 an increase of 3 per cent on the previous year, Ireland two years earlier exported €219.bn worth of goods and services, equivalent to roughly £190bn, from its main sectors, pharmaceuticals, chemicals, computer hardware and software, food products, beverages and brewing and medical devices. Ireland manages to export more than ten

[30] The direction of travel in Wales is different. First was a small Wales-based motorway services group owning Magor and a handful of sites in England but was acquired by Moto, Britain's biggest operator, (itself later sold in a venture capital deal).

times as much as Wales – an alarming disparity given its population is only 60 per cent larger.

To understand how far Ireland has come it is worth noting that in 1962 Ireland imported goods worth £273.6m. against exports of £174m, with live animals (£47m.) and food (£42m) accounting for 40 per cent of the outgoing total. in 2017 Ireland posted its widest ever trade *surplus* of €45bn**,** both exports and imports coming in at the highest level on record. The biggest trade surpluses were recorded with the United States, Belgium, Switzerland, the Netherlands, and Germany.

Ireland has used its time in the EU to reduce its dependence on the UK as an export and import partner. The US was its leading market in 2017, taking around one quarter of its exports, followed by Britain with 11.8 per cent, only marginally ahead of Belgium (11 per cent) and Germany 8.2 per cent. The UK accounted for just under a quarter of Irish imports in the same year, only slightly ahead of the US with just over 20 per cent, France (12.5 per cent) and Germany (8.9 per cent). Britain's departure from the EU will as a result harm Ireland much less than would have been the case 20 years ago.

Ireland's success in transforming itself into the 32nd biggest country ranked by GDP in 2019[31] (despite its small population) has been the result of considerable political skill, economic forethought, and some good fortune. Irish companies have become adept at using the UK as part of a wider domestic market to escape the constraints of the Republic's small population in a way few firms in Wales have. From growing a successful business in Britain, they have then gone on to expand across Europe (and the US and Asia) an achievement that that has escaped British manufacturers in similar fields - not just Welsh – in 50 years membership of the EU.

A cadre of competent Irish businesspeople has been created, some of whom have then gone on to run some of the biggest UK and European companies – Willie Walsh of British Airways and Niall Fitzgerald of Unilever being two examples. Less

[31] GDP per capita 5th of 187 (IMF) 6th of 175 (World Bank)

tangible has been the greater confidence shown by Irish individuals vis à vis the British and their role in many sectors of British life, including business, media, and the arts.

Hard questions

Even within the context of a UK economy badly in need of levelling up, therefore, some regions - the South West, for example – have done much better than Wales in adapting and modernising. Ireland, as an independent country is an even more impressive – indeed stark – example. It has been free to make economic policy choices that meet its own needs as an outlying western European country and has had considerable success, even though wealth is not spread evenly across the country but concentrated in the four cities of Dublin, Cork, Limerick and Waterford.

There are some hard questions to answer here even before the issues are considered relating to independence or greater autonomy within the UK as a solution to Wales's economic development. Why do firms retrench from Wales but rarely cut operations elsewhere in favour of Wales? Why have so few firms wanted to headquarter in Wales?

There were high hopes 30 years ago that Cardiff Bay could play this role and attract UK and international corporate offices but the waterfront development in former dockland areas has instead become largely a leisure, restaurant, and residential destination alongside the Senedd and Wales Millennium Centre. The vast sums invested in Cardiff Bay have failed even to make any impact barely more than one hundred yards across Bute Street, the area centred around Mount Stuart Square only limply redeveloped so far and looking much as it did 60 or 70 years ago - rundown and dilapidated - when the local shipping industry largely petered out.

If firms are happy to locate to Gloucester, Cheltenham, and Bristol, why have the extra 30-40 miles proved such an impediment? Why have so few consumer businesses, including retailers, failed to emerge into the daylight in Wales? Peacock, the fashion retailer, flew the flag for several years but is now part of Edinburgh Woollen Mills, leaving Iceland on Deeside and

JoJoMamanBebe in Newport as the most prominent UK retailers based in Wales, plus department store group, Leeke.

Why are Welsh firms, apart from a few multinationals so reluctant to seek out export markets? Why have Welsh food manufacturers failed to achieve scale, unlike their counterparts in Ireland or many English regions? Why has even Welsh agriculture dairy and meat produce ended up being processed in Wales by non-Welsh operators, or over the border, with few Welsh firms of scale taking up the challenge?

Rachel's Dairy (now renamed Rachel's to de-emphasise its organic credentials and housed within a French dairy multinational) has been in a game of corporate pass-the-parcel for the past 20 years while its once smaller rival Yeo Valley has become a supermarket shelf staple and remains family-owned. Equally, why are there no listed tourism businesses in Wales or even small hotel chains? Why are Welsh holiday cottages marketed by English-based businesses? These are just some of the building blocks on which a stronger Welsh economy could have been erected.

A more business-oriented economy

Over the longer term, Wales's prosperity will require a more business-oriented economy, attuned to creating greater wealth. A stronger Welsh economy would include a greater number of big, Welsh-owned companies, more medium-sized companies, and more small companies especially those with the potential to become bigger and join the ranks of £100m plus turnover groups. It also needs more overseas and UK businesses willing to commit to a what might be termed a full-scale operation in Wales, managing products and services for the whole of the UK or even European market, rather than simply using Wales as a manufacturing or lower grade service base controlled from elsewhere.

On one calculation, Wales, with 5 per cent of the UK population Wales has only 3 per cent of its SMES. To have proportionately the same as the rest of the UK Wales would need another 60,000 businesses. According to the House of Commons Library, in 2019 Wales with 3.1m people had 222,000

businesses, England (56m) 5.19m, South West England (5.6m) 562,000 and Scotland (5.4m) 334,000.

The number of SMEs has continued to grow year on year, but growth needs to be accelerated and stronger representation sought in higher value goods and services.[32] The number of companies that fail and the number that replace them - is low, another sign of a not very dynamic economy, suggesting the existence of “zombie” companies holding back the rest.

Churn rate is important. Established companies run out of ideas or prefer to do things the way they have always been done, while new businesses often see changes to make. Think of Woolworth on the High Street. Discount shopping has mushroomed in recent years – Wilkinson, Home Bargains, Poundland, B&M – yet the originator of this concept has disappeared. Covid-19 will hasten the departure of many weak companies in Wales and elsewhere. New Welsh companies in sectors that will benefit from changes in business and consumer behaviour are needed.

More and stronger companies would not only increase employment but also generate the income and profits that would enable Wales to reduce its dependence on fiscal transfers to pay for the whole range of services that central Government and Welsh Government provide. A bigger private sector is therefore needed, consisting of more and larger domestically owned and controlled businesses that will be more productive and profitable than the existing base.

It is also important that those companies can move up the value chain, developing new and innovative, IT-enabled products and services, thereby generating greater turnover and profit, and more, and more skilled, employment. Because such companies will make more profit, they will pay commensurately greater amounts of tax. They will pay higher wages, and employees will pay more tax, too, as well as having higher disposable income to spend on goods and services.

Unless Wales is happy to be a “feeder” economy, where businesses are taken over when they grow beyond the small

[32] https://wordpress.com/post/rhysdavid.blog/145

company phase, they need to be given the encouragement and resources to become larger and to avoid simply being acquired by bigger external companies wishing to grow by consolidation. This itself is a main reason for the now well-recognised missing middle. [33] We all know what happens to football's feeder clubs that exist by selling their best players: they stay in League Division One or Two and never compete in Europe.

The natural progression from small to medium-sized is being abruptly cut off, resulting in a dearth of medium-sized firms. Support offered by Welsh institutions can even bring this about. Cardiff-based Pinnacle Document Solutions, a leader in its field, was recently acquired by London company, Ethos. It represented a successful exit for the Development Bank of Wales, which had invested in the company, but meant the loss of a Welsh-based business, even if a stronger united group based outside Wales has been created to the benefit of the UK economy as a whole.

Yet, many Welsh people do have the talent and skill to develop significant businesses, though in many cases this has been done outside Wales. Current examples are the successful outdoor goods shop, Mountain Warehouse, challenger financial institution, Starling Bank, and the food delivery company, Just Eat. Specsavers, too, has a substantial Welsh connection. In Wales companies such as JoJoMamanBebe, Mrs. Bucket, Go Compare, Castell Howell and Oil4Wales also show the ability, commitment, and determination to create strong Welsh companies, and these can be exemplars.

Can lack of finance, poor road and rail infrastructure, a mountainous terrain that separates north and south go on being blamed for Welsh failure to develop as far as is needed in this direction when efforts have consistently been made to address these and other issues? Are we doomed to go on addressing the symptoms and never the underlying causes?

Wales has some catching up to do but is there any reason we cannot make better progress than in the past few decades?

[33] My piece on the missing middle in Agenda

What steps might now be taken to improve the performance of the Welsh Economy and its business sector?

Building New Connections

Wales is not prospering under the present arrangements as a devolved region within the UK. It has failed to develop the industry and service sectors that will enable it to match the growth of more prosperous regions and nations.

So, the questions are these. Is there any reason to believe the Welsh economy will grow any faster than it has in the past or that it will improve in future at a faster rate than the rest of the UK? Will the Welsh Government's 2017 Economic Action Plan (EAP) or the UK Government's Shared Prosperity Fund, the replacement for EU funding, bring about the faster growth in new business formation, inward investment, export growth, productivity and output that is needed to catch up? Or is the Welsh economy persistently going to underperform those of its competitor economies, whether by reason of geography or any other immutable factor?

The Covid-19 pandemic has further weakened the Welsh economy, and the pace of the recovery across society and across the different regions of the UK will not become clear for many months yet. As happened after the financial crisis of 2008, however, it may be the weakest regions that will find it hardest and take longest to recover.

The issues facing Wales have many causes, but one is particularly important. The UK economy has tilted heavily towards services, and London and the South East have secured the bulk of the country's higher level financial and professional services employment, as well as a large share of high technology research and development. The magnetic pull of these sectors has drawn graduates from all over Britain to start and build their careers in London, exacerbating the negative effect for Wales of the significant drift across the border to university courses. Policy at UK and EU levels has sought to mitigate rather than change these circumstances.

Nor is this the only way in which the relationship Wales and other regions have with the South-East of England is economically damaging. The Treasury protocol that insists that capital spending is directed where the greatest returns are

made magnifies this effect. It ensures infrastructure developments - HS2, Crossrail, London Airport expansion and the like – take place disproportionally in wealthier and more populous regions, reinforcing the attraction to companies and individuals of work in London.[34]

Central Government is wedded to the principle of 'rewarding success' rather than 'addressing failure'. However, it is the job of the market to do the former, and one of the roles of government to address the latter. Government policy has contributed to a 'positive' feedback loop – exacerbating these market disparities rather than reducing them.

Even well-meaning attempts to locate compensating public sector jobs in Wales can have negative effects, inhibiting rather than promoting growth. The jobs allocated – for example, the DVLA at Swansea, Business Statistics Office at Newport, and Companies House in Cardiff - increase the private-public imbalance. Since their remit concerns the UK and not just Wales top management decisions are often taken elsewhere, usually in London where senior staff remain to sustain close contact with Government and other Whitehall departments.

Public sector jobs paid at standardised rates across the UK may increase wage levels in poorer areas, but this will make jobs in the private sector where wages may be lower than elsewhere less attractive. Crowding-out will occur where well-qualified individuals choose to work in the public sector – cost centres – rather than in the private sector - profit centres.[35] Potential entrepreneurs are diverted into other career paths and inward investment becomes less attractive. It also has the effect of eroding the potential corporation tax structure.

Such jobs are also subject to shrinkage pressures, either because new technologies, such as computer technology enhancements and artificial intelligence, reduce labour

[34] Wales, like other regions waiting for the UK Government's promised levelling-up, is also disadvantaged by an exchange rate effectively set to meet the demands and interests of the financially driven service economy of the south-east of England. Areas such as Wales with a relatively higher share of manufacturing in overall GDP lose the opportunity to price goods more effectively in markets outside the UK. (In the Euro area the currency is similarly over-valued to the benefit of Germany and to the disadvantage of southern member states, a source of growing discontent in recent years.)

[35] This and other points noted here are well made by Madoc Batcup in a private paper, *Creating a new Cymru.* 2018.

requirements, or in pursuit of expenditure cuts. Because of greater dependence on such jobs, the private sector in Wales must grow faster to make up for the absence of growth in the public sector even to keep up with the GDP growth elsewhere.

Which measures are required, therefore, to counterbalance these disadvantages and remedy the underperformance of the Welsh economy? What shape should the institutions that will deliver these enhancements take? How can Wales begin to match the achievements of other countries such as Ireland that have transformed their prospects over recent years. With only some 5 per cent of the UK population the interests of Wales will never be a primary consideration for the London government, nor is it reasonable to expect that this should be the case. The policy approaches need, therefore, to be Made in Wales and implemented effectively in Wales.

However, these issues are resolved, and whether moves towards independence are regarded as the answer or not, some principles need to be enunciated. Before a start can be successfully made on the social, environmental, and other economic changes Wales needs, a bigger, better balanced and more export oriented private sector economy must be built and not just start-ups, however innovative these might be. Even if successful, a policy based on start-ups will take years to bring tangible results to the lives of ordinary people across Wales.

There must be a larger number of small, medium size *and* big companies, and a bigger proportion headquartered in Wales, or constituted as the regional headquarters of non-Welsh companies originating in the rest of the UK and overseas. Only then can a start be made on reducing the fiscal gap and its consequence, chronic dependence on centrally disbursed funds.

The structures put in place to deliver improvements must be robust, not subject to constant revision, and well resourced. The fresh thinking on the state’s role that has emerged since the pandemic should be seized on and Welsh Government must be prepared – using the best advice – to take a much more active role in shaping the Welsh economy, including if

necessary, through stakes in key businesses considered vital to the growth of a representative and balanced Welsh economy.[36]

Small business support

How can these aims be achieved when the efforts of the past 20 years and further back have met with mixed success? Support for Welsh-based small and medium size enterprises (SMEs) at various stages of development is delivered through the Development Bank for Wales – Banc to use its short form - created in 2017 with wider powers than its predecessor, Finance Wales.[37] It also provides links with other private sector sources of finance, including banks, crowd funders and business angels. Companies with larger requirements, including potential inward investors from other parts of the UK and the rest of the world, are directed to Business Wales.

Useful as its services are, and experienced and professional as many of its managers are, Banc is set up mainly to react to ideas from those seeking finance rather than as an initiator. The £5m ceiling on the funds it can offer puts a severe limit on the size of operations it can support. It measures success at least in part in exits. These frequently result in successful Welsh businesses being acquired by groups based outside Wales.

An enhanced institution (Bigger Banc) could be tasked with shaping the development of the SME sector so that it plays a more vital role across communities throughout Wales. It could bring Welsh companies together where greater scale would lead to improvements in efficiency and productivity, helping to find new investors where outside capital is required, and promoting new forms of ownership.

An impediment to the onward growth of Welsh companies has often been their acquisition by non-Welsh businesses and a subsequent loss of identity or even the extraction of brands and

[36] In the EU where opposition to state aid is an article of faith Germany is taking equity stakes in Lufthansa in return for financial support. The same is happening elsewhere.

[37] Critics have claimed the policy has had insufficient input from business itself. The Federation of Small Businesses Wales has argued that debates around business policy often default to the tactical rather than strategic. New structures and new institutions are needed.

processes to locations elsewhere. Business owners often have very good reasons for selling – access to large amounts of capital may be needed to sustain growth, family members may be uninterested in taking over a previous generation's business, existing management may not want to step in as purchasers. New mechanisms need to be found to ensure that if these issues do arise a Welsh solution can be explored. Similar measures are needed to ensure more substantial Welsh businesses are created from mergers within Wales.

It could, for example, be a requirement for any company that receives investment from public finance through Banc or other sources that the owners are obliged to offer their shareholdings to an Employees Share Ownership Trust (ESOT) when selling their shares. A new fund could facilitate the purchase by employees of companies based in Wales when the majority owner is looking to exit. The fund should also offer advice and expertise.

In 2012 the then Conservative-Liberal coalition Government declared that it wanted to move employee ownership into the bloodstream of the UK economy, but this ambition seems subsequently to have been lost.[38] It quoted academic research which demonstrated that employee-owned firms created jobs faster and were more resilient at a time of economic downturn and encouraged increased employee commitment and dedication.

More comprehensive forms of support for small firms than are currently on offer should be examined. Five years ago, a report by academics offered the Small Business Administration in the US as possible model for Wales. The creation in Wales of an organisation like the Small Business Administration (SBA) in the US was suggested in a report from Cardiff Metropolitan University, and this could be the basis for a new approach.[39]

Established more than 60 years ago it has offered coherence and consistency of support that has not been the case in Wales

[38] *Sharing Success: The Nuttall Review of Employee Ownership*. 2012

[39] Federation of Small Businesses. *Changing the Conversation: Opportunities and Practicalities involved in Establishing a Small Business Administration for Wales.* Centre for Enterprise, Cardiff School of Management, Cardiff Metropolitan University 2015.

where new institutions and policies have come and gone. Its focus, the report notes, is the four Cs of Capital (finance), Counselling (business advice, networks and training support, Contracts (public procurement), and Championing.

SMEs in Wales interviewed for the report offered a support wish list which mirrored these activities - financial support to assist growth, increased support for exporting, training, and continued education, and help in developing practical soft skills and networking.

Recommendation One. Banc should expand beyond its current remit, and a review be undertaken of the relevance to Welsh needs of institutions such as the US SBA. Employee Share Ownership Trusts should be actively promoted with a view to making such a required part of any exit strategy for a firm in receipt of public sector funds. The potential for an ESOT fund to facilitate this should be researched.

Private sector resources

Private capital could also play a bigger role in supporting Welsh business if the right connections could be established. Though there are finance houses working in Wales - very often in the role of marriage broker linking Welsh companies with outside buyers - businesses in Wales are rarely the recipients of the venture capital funds that go to support the growth and expansion of start-ups in the south of England and other prosperous regions.

There can be many reasons for this. Applicants in more prosperous regions are very often in new consumer-facing product areas that offer the Venture Capital Trusts (VCTs) the prospect of securing profitable exits, and few of these may be being found in Wales. Other businesses favoured by the VCT houses and other venture capital providers are in new IT-related and healthcare sectors with close links to top research-intensive universities.

Wales does have some businesses, in these sectors - especially healthcare - and it may simply be that the distance from the headquarters of the VCTs in London is a more important factor. A new Welsh venture capital trust that could draw in funds to support Welsh start-ups needs to be created, and efforts made

to draw in funds from Welsh investors and others in Wales and beyond.[40] It would need to have the expertise and network to know the VC world in London and elsewhere very well, and to know whom to approach for different opportunities as they arise.

Recommendation Two. Links with London-based venture capital must be strengthened, and a new Welsh venture capital trust be created that could draw in funds from Wales and beyond to support Welsh start-ups should be created.

Welsh investors would most probably be the principal sources of funds (perhaps with some initial Welsh Government funding) and given the likelihood of lower returns than many VC investors would normally be seeking, an appeal to patriotism would also help. Size is one of the several reasons that smaller companies in Wales do not get the attention of London VCTs. It takes almost as much effort to analyse a small company as a big one, so the fees are a larger proportion of a smaller transaction.

Part of this work could be done by Banc or a Welsh Government arm's length entity responsible for preparing companies for market. There is scope here, however, for linking such a project with expatriate organisations such as Global Welsh, and other Welsh networks in the City of London and elsewhere. These will contain within their ranks many individuals with experience in investment and the risk funds for what they might be persuaded is a good cause.

Recommendation Three. Links should be established with Welsh expatriate organisations to tap members' capital and expertise.

Procurement and the Foundational Economy

Could the Welsh SME economy be revivified through new more pro-active organisations as suggested above? Could such measures help to create the more balanced, prosperous, and fairer society that would be the goal? It is a big challenge, but small steps, starting with procurement policy, can set in motion the process of creating a larger cohort of Welsh firms.

[40] Vd. also https://wordpress.com/post/rhysdavid.blog/28 for a fuller discussion.

Much of the public sector's spending – Government, local government, health, education, defence, and other services – escapes from Wales but with new rules and guidelines for procurement a greater proportion could be retained. The sector has been under pressure for a long time to improve its attempts to source locally and from SMEs, thereby supporting the foundational economy.[41] Progress has been made but in practice public bodies find this much more difficult than sourcing from large companies with multiple resources.

A manifesto by economist and former university vice-chancellor Sir Adrian Webb points out, however, that the foundational economy perspective on economic development fits well with what can be achieved by a small nation with circumscribed powers such as Wales.[42] Though it presents challenges a new focus on the foundational economy - as already advocated widely across the spectrum in Wales, including by the current Labour Government – can work in tandem with other economic development initiatives to create additional growth opportunities.

Alongside a new focus on the foundational economy, and more intelligent procurement rules, there is a need for a mechanism to enable a new commitment such as this to function more effectively. The creation by Government of an entity to which public sector bodies wishing to participate could turn would help. This would do the 'hard lifting' of aggregating SME provision and help with the tender process on their behalf, making the process easier and more cost effective both for the public and the private sector.

A framework also needs to be created through which details of companies offering services can be collated. It is important, too, that these should be delivered within a relatively local area (depending on what the service/product is) to ensure that unnecessary travel and transport is not involved. This would serve wider concerns about climate change and incentivise local producers, possibly also encouraging mergers and

[41] The foundational is generally taken to comprise the production, distribution, and consumption of the necessities of everyday life, food shelter, local financial services, local transport, and local infrastructure.

[42] *Towards Inclusive Growth: Economic, Social and Political – a manifesto for a small nation*.

acquisitions and the creation of bigger and more viable companies.

Public bodies in Wales would need to be set challenging foundational economy targets with penalties such as those in operation for waste recycling. The latter has already seen impressive increases in the amount of waste being recycled and big declines in the amount going for landfill or export.

Recommendation Four: The foundation economy should be given a better-resourced place in the centre ground of Welsh economic policymaking with incentives put in place to promote much greater take-up by public and private sector purchasers. A wholesaler type body should be created to aggregate private sector provision and support tendering, together with a facility through which companies could make their offering more widely known.

In parallel, policy must be directed into Increasing the contribution Wales makes to feeding itself by investigating import substitution in areas such as vegetables where historic declines need to be reversed. Ireland has become one of the world's biggest growers of mushrooms which it exports to the UK and other markets. This is a product – like many, many others - which could as easily be produced in Wales.

The Netherlands with no better climate than Wales produces 60 per cent of the world's bulbs and commands a big share of the British flower and salad market. Its grip on this market in the UK is firm but it can be challenged. Can Wales not grow more tomatoes and lettuce under cover?

New food-growing technologies are being developed such as the use of underground food production facilities. Do we not have any old mine workings across Wales where this could be tried?[43] Interest is growing in these Controlled Environment Agriculture (CEA) methods, which by their nature do not need

[43] If, as is being suggested, demand for meat is reaching a peak in developed and developing nations because of health scares and environmental and climate concern, vegetable production is going to grow in importance. If not produced locally the food will have to be shipped and trucked in.

to be location specific. Discussions need to start with Welsh food producers to examine which methods might be appropriate in Wales and the funding this would require.

A greater emphasis on Welsh producers feeding Welsh people and exporting to other countries should be attainable. A start could be made if supermarkets could be further encouraged to boost Welsh consumer purchasing decisions. The German supermarket giant, Aldi, which with its compatriot Lidl has taken a huge bite out of their UK competitors market share, emphasises local, including Welsh labelled, products. Though they may be reluctant to admit it, UK supermarkets seem to have been shamed into similar efforts so that the availability of Welsh goods has increased. Welsh food producers need to be of a scale, however, and able to provide a much wider offering to the supermarkets before they obtain shelf space.

In the post-Covid environment there is likely to be a window of opportunity when individuals are much more likely to want to support products, including food, that patently comes from nearer home. Better and bolder labelling, including an asterisk or highlighted text on supermarket bills to indicate local provenance, would help, as would tighter controls on misleading labelling that implies foreign goods have a local source. [44]

Recommendation Five. In the aftermath of the Covid-19 crisis a window for a much greater emphasis on local production and procurement will open and this must be seized. A Welsh Government focus on how to finance and implement growth in sectors such as CEA should be developed.

Smart FDI

Better support for small businesses can be the start but can only provide a partial solution to the weakness of the Welsh economy. Such initiatives will produce few of the large or even medium size companies such as are found in much greater profusion in other regions.

[44] The Irish have used a scheme that highlights local produce on till receipts.

Other initiatives are required to strengthen the Welsh company base, including a renewed drive to bring in companies from outside Wales. The attraction of Foreign Direct Investment (FDI) was a cornerstone of post-war Welsh economic policy, particularly during the lifetime of the WDA. As such, it helped to bridge the gap in employment left by the contraction of steel and the near disappearance of coal mining by the early 1990s

Wales at the time was offering employee-intensive businesses in the motor, engineering, chemical, and pharmaceutical industries a large pool of lower-skilled workers that could adapt easily to factory production and shift working. Because of low wages Wales was a competitive location for labour before the fall of the Berlin Wall and the subsequent integration of the East European economies into the Western World, and later the EU.

A second wave of competition has followed with the emergence of China as the world's workshop, and many of the industrial processes and products previously carried out in Wales have now moved to the East. The African Continent will offer the next big pool of labour for employee hungry businesses, such as textiles, of the future. Because of technological advances most industries - steel being a notable example – also require less labour than previously for equivalent or even greater levels of output.

Wales urgently needs a new smart wave of inward investment. FDI in future, though it may still play a crucial role, will not bring in new businesses on the scale of the past and is likely to consist of much smaller operations than the large plants attracted in the second half of the 20th century, now largely resettled in lower-cost locations. Successful regions in future will consist of businesses special to the region but integrated into global supply chains. Wales needs more of these businesses.[45]

Acquisition of businesses that are integrated into the supply chains of modern processes involves interrogating not just

[45] Henry Wai-chung Yeung. National University of Singapore. *Regional Worlds: From Related Variety in Regional Diversification to Strategic Coupling in Global Production Networks*. Regional Studies Association. May 2020

traditional sources but also those areas that have successfully developed new products or processes. Expanding economies such as Israel, Singapore and Taiwan could be looking for a western European base and Wales will need to be making its advantages known. The capacity to unearth such businesses needs to be in place.

The reasons why businesses have come to Wales with modern products, such as Bosch, which invested heavily in the 1990s in an alternator plant near Llantrisant only to leave two decades later, must, however, be uncovered. Cheaper sources of production will often be cited but may not be the only reason and in any case fail to explain the greater success of some regions in retaining their investors. Peripherality can only be one of the factors otherwise Ireland could not have developed such a successful economy.

The most successful new investment of recent times in Wales has been not a manufacturing group but insurance provider, Admiral. As well as employing large numbers of people across a range of skills in Cardiff, Swansea, and Newport it has also been the seedbed for other start-ups by former employees offering a model that needs to be replicated.

Similar individuals with sound commercial ideas will need to be found, and pie-in-the-sky projects that the availability of public funds always attracts avoided. High net worth individuals willing to invest in existing Welsh businesses to help them grow without having to cede control must need be sought out, too.

The list of alumni from Asia and other parts of the world who have studied the sciences or graduated with MBAs and other business degrees at Welsh universities is long. Some will have gone on to found successful businesses and could be encouraged to consider Wales as a base for European operations

Recommendation Six. A new inward investment focus is needed on businesses capable of offering high quality jobs, even if initially in small numbers, in technology, health and sophisticated consumer-facing products. Potential investors in new technology nations need to

be cultivated and contact deepened with alumni of Welsh universities overseas.

Reshoring

The length of time it will take for the world economy to recover from Covid-19, and the impact it will have on Wales will only become clear over the next few years, but policymakers need to be alive to opportunities. An important focus of inward investment should be finding businesses that will manufacture products which for one reason or another will be better manufactured in the UK than overseas.

Perhaps some beneficial side-effects, especially for the environment, will emerge when life returns to normal post virus. Significant falls have taken place in air pollution in the affected areas where previously high levels may have been a contributory factor in the high number of deaths, compared with less industrialised countries and regions.

Many businesses and educational establishments have learnt during the Covid-19 crisis to operate remotely, but such measures cannot apply to manufacturing, a sector of greater importance to Wales than the richer regions of the UK. There will be manufacturing opportunities in reshoring which could be exploited. For environmental reasons long supply chains involving polluting air and sea transport may fall increasingly into disfavour. Companies serving the British market from within the EU may decide to restart operations.[46]

Britain has found itself severely embarrassed by the necessity to chase around the world to provide its health care sector with supplies of essential equipment and medicines. Health is only one sector that may in future be considered as appropriate for repatriation to ensure national survivability in the event of a resurgence of pandemics such as Covid-19.

Many people who have had to work from home may not want to return to daily commuting and will in future arrange to use PCs and laptops at home for at least part of their working week. If

[46] An ambition to increase market share in Britain, its biggest European market, when tariffs increase on EU-produced vehicles is reported to be behind Nissan's decision to keep open its plant in Sunderland and close its Barcelona factory. The company has previously only achieved modest sales on the Continent.

home working replaces the office in some scenarios, it may make it easier for individuals to stay in Wales to work, while providing services to the rest of the UK.

Though Wales may lose some population because of higher unemployment, there could be a surge in the number of people wishing to settle away from crowded cities, in Wales, Devon and Cornwall, the Lake District and other supposed rural idylls. This could bring talented individuals with new business ideas to Wales. Inquiries to estate agents suggest many are already considering such moves and policy should be developed to manage this effect to the benefit, rather than the detriment, of all parts Wales, including its most fragile areas.

There are likely to be other post-Covid-19 opportunities. Many business travellers may want to rely on videoconferencing rather than face-to-face meetings (though the attraction of international hotels will always be a pull for businesspeople and conference attendees). Long-haul holidays to Asia, South America and other distant parts may seem less attractive, if airlines and especially the low-cost variety are victims of the oncoming recession.

This could create openings for Wales, *if* it can provide the quality of service and experience now demanded and move away from reliance on serving the lower cost end of the market, a long-held ambition. Air fares, already vulnerable to demands for climate change action, will rise. Innovative services to meet any new needs that arise are likely to be a focus for entrepreneurs and attractive to funders, and should be so to enterprising individuals in Wales, too.

Recommendation Seven. Wales should search for businesses that might be relocated back in Britain for strategic security, environmental or other reasons. Opportunities in other fields including tourism should be exploited.

Exports

We need to recognise that the exporting propensity of Welsh businesses is low. On the surface Welsh exports to Ireland look a modestly successful £1.57bn. But drill down into the figures

and it appears no less than two-thirds of this is accounted for by petroleum, and related materials - presumably oil refined in Pembrokeshire and shipped onward, contributing minimum added value or jobs to the Welsh economy. Net of this product Welsh exports to Ireland are little more than £500m a year.

Welsh exports are not the result of the combined efforts of hundreds of Welsh companies successfully seeking out overseas markets but depend on a handful of big multinational corporations such as Airbus, Dow, Toyota, and Ford and hence are vulnerable to corporate decisions made elsewhere (and to decampment). Ford’s closure of its Bridgend operations is an example. Output at Airbus’s Deeside plant will be affected by a decline in air travel and consequent cancellation of orders for the parent’s products. Jobs are already being lost.

An expanded team of export advisers and easy to join trade missions will be required to assist Welsh small and medium-sized companies boost sales overseas (and to other parts of the United Kingdom) and to encourage companies that have not exported to get involved. A Wales website where it would be possible to order a variety of things from Wales and have them delivered collectively is one possibility, the Welsh Government working with Welsh transport and distribution companies to set up the logistics and warehousing facilities and payment software.

A greater involvement in export or even the wider British market would bring wider benefits than increased sales. Companies that export are more productive and more efficient because of exposure to higher standards in competitive markets

Companies such as authentically Welsh and Deliver Delicious are already acting as one stop suppliers of Welsh delicatessen and other products and bringing together different food products and suppliers but a bigger effort is required across other sectors. Parallel with this a fresh look is needed at Welsh port facilities and investment encouraged so that Wales can benefit from a likely trade orientation towards westerly facing markets following departure from the EU, and from UK Government freeport plans.

Recommendation Eight. The export propensity of Welsh firms needs to be encouraged and stimulated to

increase revenues and help increase the productivity and scale of Welsh business. The potential of Welsh ports to secure an increased share of the UK's trade needs to be explored.

Business Intelligence

None of this will work unless the capacity to acquire and utilise better business intelligence is developed. The first requirement is to know more about Welsh business needs. In other successful economies, such as Scotland and Ireland, the universities are mobilised to a much greater extent than in Wales to advise on the needs of existing sectors of the economy, and where future growth prospects lie. An example is the role played in Scotland by the Fraser of Allander Institute at the University of Strathclyde.

Established in 1975 it helps to inform decision-making in Scotland. It works with the business community to improve productivity and performance and with the Scottish Government to establish priorities and action plans. It runs the Holyrood Government's £225,000 Economic Futures initiative on behalf of Scottish universities and is also tasked with improving Scottish statistics.

A recent commission by the Holyrood Government in 2019 was a report by Professor Sir Anton Muscatelli of Glasgow University on how Scotland's universities could lead economic growth through industrial partnership and how Scotland could learn from other innovative European countries. [47]

Business in Wales has complained that even in the shaping of policy it has not always been consulted and it appears to lack a go-to institution for the kind of support Scottish firms can get.[48] Wales is awash with statistics illustrating its economic performance but there are deficiencies in the supply of information on business. Economic Intelligence Wales (EIW), a partnership established in 2018 between Banc, Cardiff Business School and the Office for National Statistics, is a welcome

[47] *Driving Innovation in Scotland: A National Mission*. Prof. Anton Muscatelli, Glasgow University.
[48] *The next Welsh Parliament needs to prioritise business and the economy*. Ben Cottam, ClickonWales

addition to business research capability but is very much data-driven and focused on access to finance for small businesses.

An institution like the Fraser of Allander Institute in Glasgow, operating across a much broader canvas, could play a valuable role in advising Welsh economic development officials on economic and business issues. In the interim greater use could be made of the Scottish and other similar institutions alongside EIW and Welsh academic sources.

Ways of funding such an institution and the relationship it might have with existing business schools in Wales would need to be considered. Its independence would need to be guaranteed, ruling out full scale funding by Welsh Government. Support from the Welsh business community or charitable institutions would therefore need to be sought but over time such an institution would be self-sustaining through income generated.

Recommendation Nine. Policymakers need to be equipped with better business intelligence on the needs of the Welsh economy. Welsh Government and business should back the creation of a new university centre for the study of Welsh business and business needs.

Capacity

These are ambitious proposals which strongly imply the necessity of structural changes in the way economic development policy is delivered under present largely civil service mechanisms. It will be argued that many of the ideas suggested are being done under present arrangements, but the question, given the continued weaknesses of the Welsh economy, is how effectively.

The civil service, despite use of outside consultancy, is perceived by many to be too cautious in its approach, and to be inhibited by silo mentality, each department often interpreting its mission separately from and not in consultation with others. Secondly, there is deemed by many to be an absence of settled delivery mechanisms not subject to change, which work across different Government sectors, including education and training.

Lack of co-terminosity between departments that should be linked, and the overlap of regional structures - city regions, counties, local authority partnership, regional economic offices – further exemplify a lack of integration and cohesion. Perhaps the severest criticism is that the Welsh civil service remains a “money pipe”, distributing resources from London and over the course of 20 years failing to develop the capacity to generate lasting and successful new ideas for the economy.

Various studies have claimed that the Welsh civil service – with its much shorter history than that of Scotland – is still too influenced by Whitehall and reluctant to embark on policy-making that strays too far from conventional thinking. Past mistakes - the failure of the Technium project, the still much contested absorption of the Welsh Development Agency, Education and Learning Wales, and the Wales Tourist Board into the civil service – are also considered by commentators to be imposing a burden on the Welsh civil service and ministerial psyche and inducing an action-paralysing fear of taking risks.

This is to some extent understandable. Civil servants should be there to create a framework within which business can flourish. Creating businesses is not their background or expertise, and because they are rightly incentivised to avoid risk, there is no benefit for them when businesses are successful. Welsh civil servants are bound, too, to feel a dual sense of loyalty. They are part of the UK Civil Service, and their thinking and career prospects are inevitably bound up with policy approaches that do not necessarily originate in Wales. It would be unsurprising if this did not colour their advice to Ministers.

A fresh look at the role of the Welsh civil service and the demands made on it needs to be undertaken and new more appropriate mechanisms put in place for some of the implementation tasks in economic development and tourism that it carries out.

Recommendation Ten. The role of the civil service needs to be re-considered so that it can best fulfil a mission of developing specific Welsh policies. Departments need to work much more closely together.

Delivery

There is a growing consensus outside Welsh Government that new institutions free from day-to-day civil service control are required. A much more pro-active risk-taking approach is needed to economic development which will best be delivered by a properly briefed and resourced independent agency.

Back in 2012 the House of Commons Welsh Affairs Committee in a report on inward investment lamented the abolition of the Welsh Development Agency which it said had reduced Wales's visibility in the global marketplace. It pointed out that paradoxically even five years after its abolition the WDA remained one of the most recognised development bodies internationally. It called for a dedicated promotion agency to be re-established and argued that such a body should be equipped with a mix of skills, with an emphasis on private sector experience.

Unfortunately, although the debate has rumbled on over the absence in Wales since the early 2000s of a separate development agency, unlike in many other comparable countries, there have been no signs of a willingness by Welsh Government to alter current arrangements. Indeed, at political and official level there is strong opposition, motivated, it would appear, by a fear of losing control.

The slow progress of recent years, however, makes hard to gainsay the case for change in the complex current structure under which implementation of policies is administered as a Government departmental project. A separation should be introduced into policy making and execution. Cathays Park would set the goals but leave their attainment to professionals appointed and incentivised within a new dedicated agency (or agencies, if a separate body for financing and developing small businesses based around Banc was considered appropriate) tasked with driving economic development.

Such a change would put politicians and civil servants currently fearful of losing control in a stronger position. At present they are jointly held accountable for successes and failures. An independent agency would operate to targets set by Welsh Government but not be under its day-to-day management and

control. It would need to be given clear directions but would then handle implementation and be liable for the results. Failure would have consequences for the agency's leaders, if the fault lay in execution, and at the ballot box for the politicians, if the policies had lacked merit.

A new enterprise agency, interposed between Government and business, would take on FDI attraction, export promotion, site provision and other relevant initiatives designed to strengthen the business sector, currently managed through civil service bodies. It would work with Welsh diaspora movements and help create markets for Welsh firms abroad.

The Irish inward investment agency, IDA, offers an example of how successful such an organisation can be. Admittedly helped by Ireland's low (and, even then, widely avoided) 12.5 per cent corporation tax rate, the IDA has managed to attract 210,000 jobs in client companies and a further eight in supporting industries for every 10 introduced into the country. Over recent years employee numbers have been increasing at the rate of 10,000 a year.[49] The IDA's enormous success has resulted in all five top world software companies, 14 of the 15 top medical technology, 18 of the top 25 financial services, all of the top 10 pharmaceutical, and eight of the top ten industrial automation companies having a base there.[50]

Ireland's economic clout has also made it possible to create out of its pension funds the Irish Strategic Investment Fund (isif.ie) which invests on a long-term basis to support economic activity and employment on the island, with the appropriate slogan, *Thinking in Decades.* It has strong connections with public and private sectors and seeks to drive innovation across multiple industry players.

The ISIF offers an example of how successful an institution of this sort can be, investing outside Ireland and earning rents

[49] IDA has international offices seeking investment and promoting Ireland in London, Paris, Frankfurt, Sydney, Beijing, Shanghai, Shenzhen, Seoul, Singapore, Johannesburg, Sao Paulo, Istanbul, Moscow, the UAE, plus a further eight across North America, including two in California.

[50] Ireland even has a programme of nine energy efficient Advanced Technology Buildings that looks very much like Wales's Techniums. Located in areas that have not shared in the inward investment boom three have already been taken by US pharma giants. Where possible the ATBs are located close to towns with a technology institute, so a qualified workforce is available.

from abroad. It currently has €4.1bn committed and has brought the Irish Exchequer returns of €0.6bn since 2014 as well as supporting 30,000 jobs. Its Causeway Capital venture capital subsidiary offers sums of between €2.5M and €10m. Last year it came to the rescue of UK restaurant chain, Patisserie Valerie, acquiring the stricken group from the administrators and it has investments in other UK businesses.[51]

It also has stakes in other Irish venture capital funds supporting the country's small and medium size companies. Its stated aim is to accelerate growth through direct equity investment and hands-on management support. The returns from investments of this kind in successful businesses elsewhere go to the bottom line in national accounts, supplementing national income and reducing the need for borrowings.

For an agency operating even on a fraction of the scale achieved over decades by IDA to be put in place in Wales, numbers of appropriate professionals would need to be hired, briefed, and incentivised. The best results, too, are likely to be obtained if those charged with bringing in new business are incentivised in line with results. Targets could be set for example for the growth in the number of public limited companies or in exports.

In tourism, where another independent agency is needed, Wales still attracts far fewer visitors than either Ireland or Scotland, proportionate to its size, despite its manifold attractions and closer proximity to London and other UK tourist centres, and to international airports in London, Birmingham and Manchester. Contracts to develop Welsh tourism could be put out to tender with incentive-driven targets set for the number of overseas visitors, cruise ship calls, increased levels of UK spending, and improvement in facilities.

Recommendation Eleven. New agencies outside civil service structures should be established by an incoming Government to take over the promotion of economic development in Wales. They should be properly

[51] Whether in the light of the severe downturn brought about by Covid-19 in the hospitality trade this proves to be a sound, or a mistimed, move remains to be seen. The chain has been acquired cheaply, however.

resourced and financed and their staff incentivised to produce results.

In the model outlined here, the Welsh Government would stand back from *implementing* economic development policy, but its resources would be deployed to ensure it has a role in *shaping* the evolution of the Welsh business sector. Nor would this exceptional in Britain or elsewhere. At UK level deeper Government involvement in managing the business environment is already being proposed because of the Covid-19 crisis where companies have accepted finance to support their activities and ensure survival post Covid-19.

Government funds to help businesses through the crisis, commentators have suggested, may have to be converted into equity in some cases, giving the state a role in the management of key businesses in future.[52] Limitations could also be put on directors' emoluments, dividends, and other decisions. Hints that this may be the direction of policy have come from the Government.

This can give sanction to a more direct role for the state in Wales to help create the framework within which the economy can grow more strongly, and to become more involved in its shaping, intervening when market forces are seen not to be delivering results that are in Wales's long-term interests. These include those instances where a Welsh solution could prevent businesses deemed important for the development of the Welsh economy from being lost through take-over or merger or where management control would move elsewhere.

Recommendation Twelve. While standing back from day to day management of the economic development in favour of a hands-off agency or agencies, the state in Wales should play a more central in determining the direction in which the Welsh economy develops, including where appropriate more direct financial involvement in companies, using strategic shares and other financial mechanisms.

[52] Government was not always so reluctant to support vital sectors. in 1971 the Government's decision to step in to nationalise aero-engine maker Rolls-Royce from bankruptcy was regarded as wholly appropriate.

Education

The advisers and executives needed to work with companies in the ways suggested and to ensure implementation also need to be found. They are unlikely to be found in the numbers required within Wales. These individuals would need to be well-paid, including through well-managed and strictly enforced incentives to leave successful careers elsewhere. They would need to be recruited outside Wales as well as within

Substantial investment must go into increasing the availability and take-up of management education. Perhaps the key finding in the Cardiff Metropolitan University report into lagging productivity mentioned earlier was that the quality of management in SMEs was a contributing factor. Lack of training was identified as long ago as the 1970s when a solitary individual tried to rectify it with the creation of the Wales International Management Centre. Five decades later it appears the problem is still widespread.

There are courses in Wales to train those running the nation's businesses, such as the 20Twenty Business Growth and Leadership Programme at Cardiff Met, but these need to be greatly expanded and efforts made to ensure a much higher proportion of Welsh business managers participate and benefit.

The problem extends into public sector where there is a need for better training for civil service and other similar bodies. A bigger cohort of well-trained managers for both central and local government, health and education is needed, and consideration should be given to the establishment of a college, perhaps based in one of the Welsh universities. Lampeter, away from big city distractions, might be thought an ideal location for blue-sky thinking and debate. Integration of career path and training would as a helpful by-product and lessen tension and suspicions with which the two sides of government view each other.

Recommendation Thirteen. The need to improve the management capabilities of business and public sector

leaders should be addressed with the creation of new courses and institutions.

The pipeline leading to the creation in this way of a much more successful Welsh economy also needs to be reviewed and overhauled from its roots much earlier in the education system. Welsh Governments in the past have tried understandably to invoke the idea of Wales as a small, smart country but the reality is different.

Reluctant as we may be to admit it, however, our children leave school with lower qualifications than their counterparts in the richer regions of the UK, we have continuing high levels of young people not in education, employment or training (Neets), our universities are at best mid table and at worst in the bottom half of the regular league rankings. We lack, unlike Scotland (St. Andrews and Edinburgh) and the North East (Durham), what might be termed an elite university capable of attracting students with the best examination results.

Moreover, we export large numbers of our most able students to universities in England and elsewhere. Indeed, a Government-backed programme – Seren Network – encourages students to apply for Oxford and Cambridge and other leading English universities, even though most of its beneficiaries will subsequently take up jobs outside Wales. The English regions and Wales are all net exporters of graduates, only a minority of whom return to work or set up businesses in their home areas. As such, Wales is actively helping to promote the growth of the main recipient of these students – London and the South East - to its own detriment.

Those who leave Wales also develop a less positive view of their native country. A recent study into the attitudes of Welsh students studying in Wales and England found a marked difference in opinion whether Wales would be a good place to set up in business.[53] Those studying in England were largely of the view that it would be difficult to do so and showed little knowledge of the help they might receive. By contrast those studying in Wales were much more positive, probably as a

[53] Author, Dan Roberts

result of being exposed to regular information about support for entrepreneurial activities and observing the successes of some of their recently graduated contemporaries who had started up in business.

No-one would wish to deny Welsh young people the opportunity to study at the best universities in England, the US or on the Continent. Indeed, the oldest British universities have been the destination for many Welsh students for centuries. This will continue to be the case. Measures need to be considered, however, that will act as an incentive to young people to stay in Wales to study and the highest levels of student support should be directed to Welsh young people choosing to study in Wales. Corresponding efforts should be made to draw opportunities that might be available to the attention of Welsh students who might want to return to Wales.

The effective privatisation of the university sector has resulted in its transformation in Wales into an export-earner educating large numbers of students from not just the rest of the UK but from China, India, and other Asian countries. Wales is probably the largest “exporter” of higher educational services in Europe if England is regarded as an export market, and it may well be the highest importer of such services as well.

We should not be over dependent on the former, and we should seek to reduce the latter. Dependence on non-Welsh students creates a vulnerability as the cap the Whitehall Government is to put on English students studying in Wales demonstrates. Nevertheless, the fee-paying model gives the Welsh Government an effective means to encourage talented people to remain and return to Wales when the cost of doing so is cheaper than at later stages in their career. There should be significant use of the student loan scheme financial arrangements to ensure that it is advantageous for Welsh students at Welsh universities to remain in Wales after finishing their degrees. This could also extend to returning Welsh students who have taken courses at universities outside Wales. The ability to encourage Welsh students to study at Welsh universities through this means should be examined.

Wales needs a pipeline, propelling students into Welsh business where they will meet companies and advisers who are

motivated to improve the economy. If graduates stay in Wales, their student debt should be written off over a period commensurate with the length of their degree. The same could apply to students returning to Wales.

Study in Wales, putting Wales on a similar basis to Scotland where most students do not travel across the border for courses available in their home country, could also be encouraged through the provision of finance for accommodation and living expenses for students with Welsh addresses. There may be regulatory hurdles, but it should be possible to devise a financial framework encouraging study in Wales. Student loan finance provides a means to do so. Shorter two-year degrees, spread over 40-46 weeks a year, should also be considered. This would reduce the costs to students, enable them to enter the labour market earlier, and help to alleviate the decline known to be about to happen in the size of this cohort over the next decade because of demographic changes.

Such an approach can only be adopted if the courses in Wales are appropriate to the economy's needs and attractive to students. A full-scale audit of all university and further education courses on offer across the Welsh higher and further education sectors, including apprenticeships, to ensure the needs of the economy are given priority should be conducted.

Valuable as their role has been in bringing income to Wales through recruiting large numbers of overseas students since the overall cap on numbers was lifted, the primary function of a state-funded sector such as higher education must be to make sure the training that is going to be most relevant to the work force of the future is offered. This must have a central place alongside the liberal education that one of the first literate countries in Europe would want to provide.[54]

Higher education should have a major role in economic and social change in post-Covid Wales, as Rob Humphreys pointed out in a recent article for ClickonWales.[55] HE has a good story to tell in for example its research links with anchor companies,

[54] Welsh Government also needs, particularly because of the pressures on finances from Covid-19, to ensure the well-being of our universities at a time when they are facing severe financial pressures...

[55] *We need to reinvent HE for a post-Covid Wales.* www.iwa.wales.gov.uk2020/05/

graduate start-ups and integrating employability into the curriculum, but the nexus between private sector and HE needs to be deepened, and HE brought front and centre in policies that promote the foundational economy, he observes. Higher level apprenticeships, and lifelong learning should be brought in from the margins, too.

Recommendation Fourteen. An incoming Government should review the entire Welsh higher education sector to ensure its priority is meeting the needs of the Welsh economy and society. It should set in motion measures to ensure more Welsh students stay in Wales for their degrees and their subsequent careers and that those going elsewhere are encouraged to return.

Joining the Welsh dots

The above focuses very largely on measures that will lead to a more business orientated and hence more prosperous Wales, but it remains important to remember that the creation of a stronger Welsh nation is at the heart of this. Nationhood has been strengthened by the late 20th century burst of institution building – and especially the Senedd – but Wales remains fractured by its lack of inter-connectedness.

Wales has never had a natural capital like London, Edinburgh, Paris, or Berlin, to which all the country's roads have led. For the best part of 1,000 years Cardiff was a county town, an administrative and retail Mecca for Glamorgan and to some extent Gwent but not the north or west. Yet it is the best capital we have got and antagonism towards it is destructive. The importance of big cities in economies everywhere is now established and is not going to wane.

Infrastructure policy must ensure smooth transport links throughout Wales to and from towns and cities where most current and future jobs are located.[56] But, as well as seeking to link up towns and cities all over Wales with their neighbours, policy should have as one of its objectives making it possible

[56] The French *emploi franc* scheme which offers subsidies to employers who take on workers from designated districts where opportunities are fewer may be relevant.

for people everywhere to communicate more easily with their capital.

Past practice and policy have tried to ensure road and rail infrastructure delivered Welsh people, and goods, across the border to England. This needs to be counter balanced in future by greater attention to internal and especially north south links. Wales will also need not to be left behind in the roll-out of 5G telecommunications infrastructure which will be a vital tool for businesses and individuals seeking to spend more of their working time at home.

There are other issues that have not been tackled here. It has long been an ambition in Wales to attract more companies using or involved in the development of green technologies and this can also be a valuable route for Wales to take out of the current Covid-19 crisis as well as for the future. The renewables industry has over recent years become much more competitive with oil, where the returns for investors over succeeding decades look much less healthy as the world decarbonises.

The Social Market foundation has called on the UK Government to train those likely to be left jobless by the coming recession to work in the low carbon economy, claiming the sector as a whole could offer new jobs to one half the 1.4m people likely to be left unemployed.[57] Wales should make sure it is part of any such moves.

Recommendation Fifteen. Transport infrastructure policy as well as eliminating local obstacles to travel should incorporate a commitment to creating greater cohesion and ease of travel between all parts of Wales. Wales must be able to match other regions and nations in the quality and competitiveness of its telecommunications infrastructure.

[57] Unfortunately, Wales lacks champions in the energy sector, as current assets are almost entirely owned externally. The last vestiges of formerly nationalised South Wales Electricity (later Swalec and later still Scotland-based SSE) now seem set to disappear as new energy supplier, Ovo, the latest owner and itself partly owned by Mitsubishi, retrenches back to Bristol, with jobs in Cardiff among those to be cut.

Can Wales Do it?

This paper has attempted to elucidate the underlying problems of the Welsh economy and to offer some suggestions as to how to address them, whether within the Union or outside it. Various studies of the Welsh fiscal deficit and the cost of independence have tried to suggest ways in which Wales could get closer to paying its way. Lower defence spending, a generous settlement for Wales's inherited national debt obligation, resource taxes on exported water and energy might help.

There are also other revenue-raising possibilities (in an independent Wales), such as pylon and pipeline taxes on resources transiting across Wales, or a switch from taxation of cars to a road usage levy. Electronically gathered, like the Dartford Crossing fee and the London congestion tax, this would harvest rent from trucks and other vehicles making regular usage of Welsh roads without contributing to their upkeep, including vehicles travelling along the A55 and M4/A40 to and from Ireland to England and the Continent.

The policies and mechanisms outlined above can be instituted within the existing constitutional dispensation, providing politicians and civil servants are willing to look at new ways of operating, and are prepared to look at new mechanisms for stimulating economic development and shaping the economy.

A stronger and better-balanced Welsh economy, moving in a different direction from dependence on a financial services-dominated South East of England, can generate increasing confidence in doing things differently and a discernible and credible path to independence, if that should be the ultimate wish of the people of Wales.

Wales, and especially its leaders, must, however, undergo a transformation to a much more business-oriented mindset. Herein lies the challenge and the opportunity. The current approach produces a contest between those whose prism is social justice and group rights and those whose basic approach is to maintain a small state and focus on the individual.

There is a third way which would be more appropriate for Wales, which looks at how to improve economic and social justice, based on such measures as are needed to create a

stronger economy. The dilemma, however, is whether there is the capacity within Wales to achieve this and if not how, and how quickly, it can be developed.

Summary and Recommendations

People in Wales ought not to be happy about the current state of their nation. We are dependent on others - the richer regions of the UK - for our welfare, and the promises of devolution appear not to have been forthcoming. Admittedly, there have been huge challenges, but in the run-up to the 1997 referendum vote it was argued that if Welsh people were put in charge of their economy, weaknesses, which even then had existed for 50 years or more, could start to be solved.

Though progress since has been considerable and the Welsh Government has been a front-runner in some of the social legislation it has passed Wales still lags most other parts of the UK economically, behind an increasingly prosperous Ireland, and risks being overtaken by some of the fast-developing most recent EU entrants. Yet there lurks deep in the Welsh psyche the fear of “leaving nurse in case of something worse” which has perhaps suppressed the willingness to look at radical alternatives.

If solutions were easily accessed, they would have been found many years ago, given the long-standing efforts and the resources that have been deployed in a bid to find them. We have a welter of reports on the problems of the economy dating back over the years since devolution, including the productivity and output gaps with the rest of the UK, and in a recent report from Cardiff University on the size and composition of the Welsh fiscal gap. This offers a sobering view of the extent of our dependence – the failure to raise enough in taxes to pay for all the service received.

This report has sought to set out the background against which decisions about the Welsh economy and Wales’s future need to be made. It sets out firstly the context in which Wales now finds itself within an economy heavily dominated by the needs of the financial services industry of the South East of England. It seeks to show that the business structure of two other territories with which comparisons are made, the South West of England and the Republic of Ireland are much stronger, and the latter

particularly, better equipped to survive as modern high-technology economies.

Finally, it offers some suggestions for radical policy directions an incoming Welsh Government might take in 2021. It suggests that dealing with the problems Wales suffers from will require the creation of new institutions to handle economic development, a greater readiness on the part of the Welsh Government to shape the economy, including using state funds, and just as importantly a change in mindset to a much more business-oriented way of thinking.

Some of the ideas will be dismissed as too radical. Nevertheless, what is outlined here aims to better inform the debate Wales needs to have and perhaps offer a mirror to the Welsh condition that we have been reluctant to gaze into. Wales needs a stronger economy whatever future direction it takes politically and constitutionally.

Recommendation One. *Banc should expand beyond its current remit, and a review be undertaken of the relevance to Welsh needs of institutions such as the US SBA. Employee Share Ownership Trusts should be actively promoted with a view to making them a required part of any exit strategy for a firm in receipt of public sector funds. The potential for an ESOT fund to facilitate this for all companies should be researched.*

Recommendation Two. *Links with London-based venture capital must be strengthened and a new Welsh venture capital trust that could draw in funds from Wales and beyond to support Welsh start-ups should be created.*

Recommendation Three*. Links should be established with Welsh expatriate organisations to tap members' capital and expertise.*

Recommendation Four: *The foundation economy should be given a better-resourced place in the centre ground of Welsh economic policymaking with incentives put in place to promote much greater take-up by public and private sector purchasers. A wholesaler type body should be created to aggregate private sector provision and support tendering, together with a facility*

through which companies could make their offering more widely known.

Recommendation Five. *In the aftermath of the Covid-19 crisis a window for a much greater emphasis on local production and procurement will open and this must be seized. A Welsh Government focus on how to finance and implement growth in sectors such as CEA should be developed.*

Recommendation Six. *A new inward investment focus is needed on businesses capable of offering high quality jobs, even if initially in small numbers, in technology, health and sophisticated consumer-facing products. Potential investors in new technology nations need to be cultivated and contact deepened with alumni of Welsh universities overseas.*

Recommendation Seven. *Wales should search for businesses that might be relocated back in Britain for strategic security, environmental or other reasons. Opportunities in other fields including tourism should be exploited.*

Recommendation Eight. *The export propensity of Welsh firms needs to be encouraged and stimulated to increase revenues and help increase the productivity and scale of Welsh business. The potential of Welsh ports to secure an increased share of the UK's trade needs to be explored.*

Recommendation Nine. *Policymakers need to be equipped with better business intelligence on the needs of the Welsh economy. Welsh Government and business should back the creation of a new university centre for the study of Welsh business and business needs.*

Recommendation Ten. *The role of the civil service needs to be re-considered so that it can best fulfil a mission of developing specific Welsh policies. Departments need to work much more closely together.*

Recommendation Eleven. *New agencies outside civil service structures should be established by an incoming Government to take over the promotion of economic development in Wales. They should be properly resourced and financed and their staff incentivised to produce results.*

***Recommendation Twelve**. While standing back from day to day management of the economic development in favour of a hands-off agency or agencies, the state in Wales should play a more central in determining the direction in which the Welsh economy develops, including where appropriate more direct financial involvement in companies, using strategic shares and other financial mechanisms.*

***Recommendation Thirteen**. The need to improve the management capabilities of business and public sector leaders should be addressed with the creation of new courses and institutions.*

***Recommendation Fourteen.** An incoming Government should review the entire Welsh higher education sector to ensure its priority is meeting the needs of the Welsh economy and society. It should set in motion measures to ensure more Welsh students stay in Wales for their degrees and their subsequent careers and that those going elsewhere are encouraged to return.*

***Recommendation Fifteen.** Transport infrastructure policy as well as eliminating local obstacles to travel should incorporate a commitment to creating greater cohesion and ease of travel between all parts of Wales. Wales must be able to match other regions and nations in the quality and competitiveness of its telecommunications infrastructure.*

October 19th 2020